



Application Form for India: Health System Strengthening (HSS) Support in 2016

Document dated: April 2017

<p>HSS Application Form</p>	<p>Purpose of this document:</p> <p>This application form must be completed in order to apply for Gavi's HSS Support. Applicants are required to read the HSS Application Instructions prior to completing this application form and are advised to refer to these instructions whilst completing the application form. Applicants should first read the HSS Guidelines before this document.</p> <p>The application form, along with any attachments, must be submitted in English, French, Portuguese, Spanish, or Russian.</p>
<p>Contact information:</p> <p>For any questions regarding the application guidelines, please contact applications@gavi.org or your Gavi Senior Country Manager (SCM).</p>	

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PART A: SUMMARY OF SUPPORT REQUESTED AND APPLICANT INFORMATION

1. Country and Gavi portfolio information

(Data partially pre-filled; please update as relevant)

1a. Country information and proposal overview

Country name	India				
Years of National Health Plan:	2012-2017				
Years of immunisation strategy (e.g. cMYP):	2013-2017				
Total annual immunisation budget/per capita (past year)	US\$ 1219 million for 2016 (projected as per cMYP) (Total Annual budget for immunisation) ¹				
Total health expenditure/per capita (past year)	US\$ 56 for 2013-14 ²				
Transition status from Gavi support (if relevant)	Projected to enter accelerated transition phase in 2017				
Total HSS funding requested (US\$)	US\$ 100 million				
Proposed HSS grant start/end dates:	2017-2021				
	Year 1	Year 2	Year 3	Year 4	Year 5
Indicative HSS support by year (million US\$)	2017 22	2018 21	2019 21	2020 20	2021 16

1b. Existing portfolio of Gavi support

Type of support	Commitments (US\$)	Duration
Penta	\$ 265,000,000	2011-2015
IPV	\$ 28,905,539	2015-2016
HSS 1	\$107,000,000	2014-2016

1c. Vaccines to be introduced with Gavi support during the period 2017-2021:

Vaccine	Planned date for introduction/short description of phased approach, if relevant
MR	Q1 2017
PCV	Q2 2017
Rota	Q3 2017 (tentative)
HPV	2020-21 (tentative)

1d. Status of country's performance against key immunisation indicators aligned to the Gavi Strategy (2016-2020), based on the country's updated performance framework (including source and year)

¹ cMYP 2013-17 (per capita budget information not available)

² National Health Accounts 2013-14

Routine coverage: Penta 3 coverage at national level	DPT3/ Pentavalent 3: 87% ³
Measles containing vaccine (first dose) coverage at national level (MCV1)	87% (JRF 2016), 87% (WUENIC data of 2015 as on 5 th July 2016)
Fully immunised child (define the vaccines included)	86% (HMIS 2015-16 reporting) ⁴
Drop-out rate between Penta 1 and Penta 3	3% ³
Equity of vaccine coverage by geography: percentage of districts or equivalent administrative area with Penta 3 coverage greater than 80%	66% ³
Equity of vaccination coverage by poverty status: percentage point difference in Penta 3 coverage in highest vs. lowest wealth quintile)	24.8 % (87.2 vs 62.4 - DPT3, RSOC 2013-14)
Vaccination coverage by education status of mother/caretaker: percentage point difference in Penta 3 coverage among children whose mother/caretaker received no education vs. completed secondary education or higher	25.6% (60.2 vs 85.8 - DPT3, RSOC 2013-14)
Data quality: percentage point difference between Penta 3 national administrative coverage and survey point estimate	74.8% (DPT3, RSOC 2013-14) 89.62% (DPT3 + Penta 3, HMIS 2013-14)
Country composite score on last Effective Vaccine Management (EVM) (year and aggregate score)	60% (based on EVM assessment of 5 states over the last two years comprising 30% of birth cohort)
Other relevant information.... (add as needed)	

2. Application development process (Maximum 1 page)

Provide an overview of the collaborative and participatory application development process.

Include the following **Mandatory Attachments**:

#4: Minutes of HSCC meeting, at which the HSS application was endorsed;

#5: Last 3 minutes of HSCC meetings; and **#15:** TOR of HSCC

Gavi has, as part of the catalytic fund during the transition period 2017-2021, approved USD100 million for Health Systems Strengthening for immunization (HSS2). The proposal was developed through a consultative process with all stakeholders chaired by the Ministry of Health and Family Welfare (MoHFW). A brainstorming meeting was held on 17 May 2016 by MoHFW along with major partners and a team from Gavi, to discuss, among other issues, the expectations from Gavi HSS2 support including priority areas. This was followed by a workshop on 23 August 2016 with the proposed HSS implementing partners viz UNDP, UNICEF, WHO and JSI and other partners (USAID, BMGF, GHS, CSOs, the Gavi Secretariat, HSS consultant, and ITSU) to identify challenges and gaps and determine key priorities in the UIP. A series of other meetings were held to discuss priority areas as per the domain expertise of each partner. Further, the linkages and transition plan from HSS1 to HSS2 and sustainability aligned with each priority area were identified. The challenges were identified using inputs from the mid-term review of HSS1, the mid-term review of the comprehensive multi-year plan (2013-17), HMIS and MCTS data, various surveys carried

³ JRF reporting 2016

⁴ BCG + DTP123/Penta123 + OPV123 + MCV1

out in recent years (DLHS 4, RSOC), and draft objectives and key activities (proposal) developed. Another workshop was held on 6 October 2016 by the MoHFW with key stakeholders, including members from the Gavi secretariat. The objective was to discuss challenges and learning from HSS1, draft the HSS2 objectives, key activities, activity indicators, intermediate results, and immunization outcomes including sustainability plans for each objective.

The suggestions were then incorporated in the application format (proposal) and the final proposal was approved by the IAG at its meeting held on 5 December 2016. An Independent Expert Team reviewed the proposal and also held discussions with representatives from the MoHFW, implementing partners, ITSU, GHS, CSO representatives, BMGF and USAID in New Delhi from 14-19 December 2016. A workshop was held from 15-17 March 2017 to finalise the proposal taking into consideration the comments made by the Review Team.

3. Signatures

3a. Government endorsement

*Include Minister of Health and Minister of Finance endorsement of the HSS proposal – **Mandatory Attachment #2.***

We, the undersigned, affirm that the objectives and activities of the Gavi proposal are fully aligned with the national health strategic plan (or equivalent), and that the funds for implementing all activities, including domestic funds and any needed vaccine co-financing, will be included in the annual budget of the Ministry of Health.

Minister of Health (or delegated authority)

Minister of Finance (or delegated authority)

Name:

Name:

Signature:

Signature:

Date:

Date:

3b. Health Sector Coordinating Committee (HSCC) endorsement

*Include HSCC official endorsement of the HSS proposal – **Mandatory Attachment #3***

Include a signature of each committee member in attendance and date.

Mandatory Attachment #3: HSCC Endorsement of HSS Proposal

We the members of the HSCC, or equivalent committee met on the _____ (date) to review this proposal. At that meeting we endorsed this proposal on the basis of the supporting documentation which is attached. The minutes of the meeting endorsing this proposal are attached to this application.

Please list all HSCC members	Title / Organisation	Name	Sign below to confirm:	
			Attendance at the meeting where the proposal was endorsed	Endorsement of the minutes where the proposal was discussed

Chair	Joint Secretary			
Secretary				
MOH members	DCs			
Development partners				
CSO members				
WHO				
UNICEF				
Other				

4a. Executive Summary

Gavi Health Systems Strengthening (HSS) project was proposed by Ministry of Health and Family Welfare (MoHFW), Government of India (GoI) with the aim to increase immunization coverage and strengthen health system for immunization in the country.

India obtained Gavi support of USD 107 million for three years (2014-16) to support GoI's intensified efforts focusing on overall health system improvements through targeted support to strengthen RI and accelerate new vaccine introduction, in alignment with the national targets set by the RI cMYP.

In the second phase (2017-21), Gavi has approved USD 100 million for Health Systems Strengthening for immunization (HSS2). This HSS 2 proposal was developed through a consultative process with all stakeholders led by the Ministry of Health and Family Welfare (MoHFW), Government of India. A series of workshops and meetings were organised to identify challenges and gaps in the Universal Immunization Programme (UIP), identify key programme priorities and then draft the key objectives and activities for HSS 2. Further, the linkages and transition plan from HSS1 to HSS2 and sustainability aligned with each priority area were identified. These workshops were attended by officials of MoHFW, representatives from implementing partners namely UNDP, UNICEF, WHO and JSI and other partners (USAID, BMGF, GHS, CSOs, the Gavi Secretariat, HSS consultant, and ITSU). The comments of the review team have also been taken into consideration before finalizing the proposal.

The overarching goal of the activities proposed in the Gavi HSS 2 proposal is to improve the quality and level of immunization coverage in India and prepare for the adoption of new antigens by catalysing the development of immunization programme that is capable of high performance even in settings where the capacity of the regular government infrastructure is limited. The proposal is in alignment with national targets and focuses on improvement on both the supply side and demand side of RI and policy-making to guide programmatic improvements and expansion of the UIP

The key objectives of HSS 2, the activities proposed under each objective and the implementing agency (in parenthesis) are summarised below:

1. To strengthen and maintain robust data systems to improve evidence based decision making
 - 1.1. Sustaining RI monitoring to improve the quality of immunization services (WHO)
 - 1.2. Capacity building at national, state and district levels for expansion of VPD surveillance (WHO)
 - 1.3. Introduction of ANM Online (ANMOL) as way to improve data collection and management to improve service delivery (UNICEF)
 - 1.4. Monitoring and Evaluation are planned to provide data for improved decision making (UNICEF)
 - 1.5. Research interventions (UNDP)
 - 1.6. HR support at national level (WHO)
2. To improve capacity of human resources for service delivery and programme management for equitable and efficient immunization services.
 - 2.1. Capacity building of master trainers for microplanning and RI strengthening (WHO)
 - 2.2. Rapid Immunization Skill Enhancement (RISE) – a continuous knowledge building system strengthening approach in India (JSI)
 - 2.3. Development of a tribal strategy for Immunization programme (UNICEF)
 - 2.4. Enhancing RI quality and coverage, and addressing inequities in urban areas (WHO)
3. To strengthen vaccine logistics and cold chain management through improved data systems, infrastructure strengthening and human resource capacity
 - 3.1. Capacity development of cold chain and vaccine handlers, technicians and vaccine logistics managers (all states) – (UNICEF)
 - 3.2. NCCMIS augmentation and Immunization Supply Chain-Cold Chain data harmonization – (UNICEF)
 - 3.3. Support Government in review and implementation of EVM Improvement Plans (16 large states) – (UNICEF)
 - 3.4. Strengthening of institutions, cold chain infrastructure, and equipment – (UNICEF)
 - 3.5. To strengthen vaccine logistics management through electronic vaccine intelligence network (eVIN) - (UNDP)
4. To improve demand generation for immunization services to improve coverage and address inequities
 - 4.1. Capacity development of FLWs/ community health service providers on SBCC and IPC through training of master trainers - (UNICEF)
 - 4.2. Communication planning linked with micro planning to reach high-risk/ underserved through SBCC cells in 16 states- (UNICEF)
 - 4.3. Strengthening community based multi-stakeholder partnerships-(UNICEF)

4.4. Effective use of Polio assets and strategies for RI health systems strengthening, innovations for communities outreach activities and SMNet- (UNICEF)

4.5. Communication monitoring and supportive supervision through use of standardized formats, dashboard analysis- (UNICEF)

The four lead implementers, UNDP, WHO, JSI and UNICEF will work in close collaboration and Gavi Secretariat (Project management Cell) will monitor the progress of the proposed activities with the overall stewardship of Immunization Division at MoHFW. The progress will be monitored with the help of the performance framework developed for HSS 2.

The Immunization Action Group (IAG) with Joint Secretary (RCH) as chairperson, MoHFW officials and development partner representative as members, will regularly review the progress.

4b. Acronyms

Provide a full list of all acronyms used in this application.

Acronym	Acronym meaning
AEFI	Adverse Events Following Immunization
AFP	Acute Flaccid Paralysis
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
AYUSH	Ayurveda, Yoga, Unani, Siddha and Homoeopathy
BCC	Behaviour Change Communication
BCG	Bacillus Calmette-Guerin
BMGF	Bill & Melinda Gates Foundation
BRICKS	Building Routine Immunization Knowledge and Skills
CBO	Community Based Organization
CCE	Cold Chain Equipment
CCH	Cold Chain Handler
CCP	Cold Chain Point
CCT	Cold Chain Technician
CES	Coverage Evaluation Survey
CHC	Community Health Centre
cMYP	Comprehensive Multi-year Plan
CRM	Common Review Mission
CRS	Congenital Rubella Syndrome
CSO	Civil Society Organization
D/CLVMC	District/City Level Vigilance & Monitoring Committee

DLHS	District Level Household Survey
DPT	Diphtheria Pertussis Tetanus
DTFI	District Task Force on Immunization
DQA	Data Quality Assessment
EPC	Empowered Programme Committee
eVIN	Electronic Vaccine Intelligence Network
EVM	Effective Vaccine Management
FYP	Five Year Plan
GHS	Global Health Strategies
Gol	Government of India
HMIS	Health Management Information System
HR	Human Resource
HRA	High Risk Area
HSS	Health System Strengthening
HW	Health Worker
IAG	Immunization Action Group
IAP	Indian Association of Paediatrics
IEC	Information, Education, and Communication
IMR	Infant Mortality Rate
IPV	Inactivated Polio Vaccine
ITSU	Immunization Technical Support Unit
JRF	Joint Reporting Format
JSI	John Snow Inc.
KAP	Knowledge, Attitude and Practice
LQAS	Lot Quality Assurance Sampling
M&E	Monitoring and Evaluation
MCTS	Mother and Child Tracking System
MMR	Maternal Mortality Ratio
MO	Medical Officer
MoHFW	Ministry of Health and Family welfare
MoWCD	Ministry of Women and Child Development
MR	Measles and Rubella
MSG	Mission Steering Group
MTR	Mid-term Review
NCCMIS	National Cold Chain Management Information System
NCCVMRC	National Cold Chain & Vaccine Management Resource Centre

NFHS	National Family Health Survey
NGO	Non-governmental Organization
NHM	National Health Mission
NICE	National Immunization Coverage Evaluation
NPSP	National Polio Surveillance Project
NRHM	National Rural Health Mission
NUHM	National Urban Health Mission
PATH	Programme for Appropriate Technology in Health
PCV	Pneumococcal Conjugate Vaccine
PHC	Primary Health Centre
PIP	Programme Implementation Plan
RI	Routine Immunization
RMNCH+A	Reproductive, Maternal, New born, Child, and Adolescent Health
RSOC	Rapid Survey on Children
SBCC	Social and Behavioural Change Communication
SDG	Sustainable Developmental Goal
SMNet	Social Mobilization Network
SMO	Surveillance Medical Officer
SRS	Sample Registration System
STFI	State Task Force on Immunization
TFR	Total Fertility Rate
ToT	Training of Trainers
T-VaCC	Training for vaccine and cold chain
UIP	Universal Immunization Programme
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VMC	Vaccine Management Course
VPD	Vaccine Preventable Disease
WHO	World Health Organization
WUENIC	WHO/UNICEF Estimates of National Immunization Coverage

PART B: BACKGROUND INFORMATION

5. Description of the National Health Sector *(Maximum 1 page)*

Provide **Attachment #8**: NHSP or equivalent and reference which sections describe the national health sector. If no existing approved national document describes the national health sector, noting

the description of the national health sector in the last HSS proposal, provide any new contextual information relevant to this proposal.

India has 29 states and 7 union territories, with a population of 1.21 billion (68% rural and 31.2% urban), sex ratio of 943 (no. of females per 1000 males) and overall literacy rate of 73.0%⁵. In the Constitution of India, provision of health services is a State subject. The States are responsible for implementation and supervision of the various programmes and for provision of relevant infrastructure and curative services. At the national level, the GoI (GOI) lays down policies and guidelines for implementing the national programmes of public health importance.

The health service delivery system in the country consists of a mix of public sector units/institutions (government health centres/hospitals at primary, secondary and tertiary levels, super speciality hospitals established by the Centre and State departments of health), private sector, non-governmental organizations (NGOs) and the Indian systems of medicine. In the public sector, the MoHFW is the central authority responsible for funding and oversight of various flagship programmes and schemes.

The National Rural Health Mission (NRHM), launched by GoI in 2005, has made substantial improvement in the public health care delivery system to enable an integrated and holistic approach to primary, secondary, and tertiary care, through better infrastructure, availability of HR, and drugs and equipment. In 2013, GoI launched the National Health Mission (NHM) overarching two sub-missions: the National Urban Health Mission (NUHM) and the National Rural Health Mission (NRHM). NHM encompasses the integrated Reproductive Maternal new born Child Health plus Adolescent (RMNCH+A) initiatives, disease control, and urban health and quality assurance, and provides assistance to States for related infrastructure development and HR. NHM aims to achieve universal access to equitable, affordable health care services that are accountable and responsive to people's needs. The outcomes of NHM are as articulated in the country's 12th Five-Year Plan (FYP), which includes reduction of IMR to 25 per 1000 live births. NHM allows states a flexible mechanism of allocating funds for system improvement in a manner that is consistent with their needs and challenges. All states are required to submit a programme implementation plan (PIP) in advance of each financial year, along with complete projections of funds required to implement the PIP. See **Annexure 3** for more on NHM.

The district acts as a link between the state structures and the peripheral level structures such as Community Health Centres (CHCs), Primary Health Centres (PHCs) and Sub-Centres. The district officer with overall control of all the health programs within a district is designated as the Chief (or District) Medical and Health Officer. In addition, every district has a District Health Society, which is responsible for planning and managing all health and family welfare programmes in the district. The districts are responsible for working and coordinating with their states for implementation and supervision of various programmes, including immunization. State and district Task Forces are responsible for monitoring the immunization programme.

Under NHM, over 172,876 health personnel have been added to the health system across the country (till June 2015), which include 10,618 allopathic doctors/specialists, 24,890

⁵Census of India 2011.

http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/4Executive_Summary.pdf

AYUSH doctors, 73,154 Auxiliary Nurse Midwives (ANMs), 40,847 staff nurses, and 23,367 paramedics including AYUSH paramedics. The Accredited Social Health Activist (ASHA) has been active in all states as an essential link between the community and the public health system. ASHAs (0.9 Million as on 30th June 2015) are engaged and trained in each village / large habitation in the ratio of one per 1000 population.

India has made considerable progress in reduction of infant mortality from 80 in 1991 to 39 in 2014⁶ (SRS). It is also one of the signatories of the Sustainable Development Goals (SDGs), and has committed to achieving SDG Goal 3 by 2030, which focuses on achieving universal health coverage, and providing access to safe and effective medicines and vaccines for all. Supporting research and development for vaccines is an essential part of this process as well as providing access to affordable medicines⁷.

The 12th FYP (2012-17) also focused on some other key indicators of health including MMR, TFR, raising child sex ratio, prevention and reduction of anemia among women aged 15-49 years, and prevention and reduction of malnutrition among children under 3 years. Some of the significant milestones achieved include eradication of guinea worm (Feb 2000), achieving polio-free certification (March 2014), and elimination of maternal and neonatal tetanus (May 2015). From 2000 to 2012, mortality from tuberculosis and measles has declined by 33% and 51%, respectively.⁸ The adult HIV prevalence at the national level has continued its steady decline from an estimated peak of 0.38% in 2001-03 through 0.34% in 2007 and 0.28% in 2012 to 0.26% in 2015.⁹

India's National Health Policy 2017 has been approved by the Union Cabinet on 15.3.2017. The key objective of this Policy is to improve health status through concerted policy action in all sectors and expansion of all services provided by the public sector with focus on quality. The Policy envisages reduction in IMR to 28 by 2019 and Under-5 Mortality to 23 by 2025. For immunization services, the Policy states that priority would be given to further improve immunization coverage with quality and safety, improve vaccine security as per the National Vaccine policy 2011 and introduction of new vaccines based on epidemiological considerations. The focus would be to build on the success of Mission Indradhanush and strengthen it. The Policy has set a target of increasing full immunization coverage to more than 90% by 2025.¹⁰

6. National Health Sector Plan (NHSP) and relationship with cMYP (*Maximum 1 page*)

Describe the relationship of the cMYP to the national health strategy. Also describe the status of development of new plans if the timeframe of the requested new HSS support goes beyond the duration of the current plans.

*Provide: **Mandatory Attachment #8:** NHSP and **#11:** cMYP; and if available: **Attachment #18:** Joint Assessment of National Health Strategy (JANS); and **Attachment #19:** Response to JANS.*

India followed a five-year planning cycle until recently and included the overall plan priorities and projected budget needs. The 12th FYP (2012-17) recognised that complete

⁶ SRS 2014: http://www.censusindia.gov.in/vital_statistics/SRS_Bulletin_2014.pdf

⁷ <http://www.un.org/sustainabledevelopment/health/>

⁸ Global Health Estimates. http://www.who.int/healthinfo/global_burden_disease/estimates/en/index1.html

⁹ <http://naco.gov.in/sites/default/files/HIV%20Facts%20&%20Figures.pdf>

¹⁰ National Health Policy 2017

immunisation (all vaccinations) remains a challenge, especially in some states, even though coverage rates for vaccinations have significantly improved in the recent past. It was envisaged that during the 12th Plan, IMR, MMR, institutional deliveries, child immunisation and vaccination of religious minorities will be brought at par with the national average, with special focus on the economically weaker and socially marginalised sections. In addition, the existing alternate vaccine delivery mechanism through mobile immunization services for outreach work will be upgraded; electricity supply will be ensured, especially at places where cold chains are maintained; the Mother and Child Tracking system (MCTS) and Mother and Child Protection Card jointly issued by MoHFW and MoWCD would be implemented effectively to capture immunisation data; use of available vaccines for various preventable diseases would be expanded through an evidence-based approach and public awareness of the benefits of immunization will be built to increase demand for services.

MoHFW funds the national immunization programme, providing technical assistance and policy guidance to the States, and for monitoring and evaluation. The funds to the States for the immunization program is administered under the National Health Mission; the immunization programme is included in the activities of the RMNCH+A.

Under the 12th FYP, a total budget allocation of ~ 45097 USD (for plan period) was made to the MoHFW. By 2017, the Plan envisaged a total public spending on core health (together by Centre and State) to be 1.87% of the GDP.¹¹ The recently released Health Policy 2017 proposes a target of raising public health expenditure to 2.5% of the GDP in a time bound manner.

Currently, UIP provides vaccines free of cost to protect against diphtheria, pertussis, childhood tuberculosis, poliomyelitis, measles and neonatal tetanus, hepatitis B, Hib, rotavirus (in selected states) and Japanese Encephalitis (in endemic districts). The country is in the process of introducing PCV, conducting MR campaign, and expanding rotavirus vaccine. The vaccines and related logistics are procured by the Central government and immunization funding for staff and other health system resources in a State is provided jointly by NHM and the State.

The UIP progress is monitored at the highest political level, the Prime Minister's Office, which has emphasized the need for an organized and aggressive action plan to achieve the UIP objectives.¹²

The comprehensive Multiyear Plan (cMYP 2013-2017) for RI is aligned to the national FYP. The objective of cMYP is to reduce mortality and morbidity due to vaccine preventable diseases through high quality immunization services. Health system strengthening (HSS) is one of the components of the current cMYP. Funds for HSS were obtained from Gavi to leverage the success of the National Polio Surveillance Project (NPSP) to strengthen the RI service delivery in priority States; strengthen cold chain management in poorly performing States through improved HR strengthening and supportive supervision; design and implement an electronic vaccine intelligence network (eVIN) that will enable real time information on cold chain temperatures and vaccine stocks and flows; increase demand for RI through a national behaviour change communication (BCC) strategy; and strengthen the evidence base for improved policy making on programmatic areas through a national M&E

¹¹ Twelfth plan Vol.III. http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp_vol3.pdf

¹² <http://pib.nic.in/newsite/PrintRelease.aspx?relid=136507>

research framework. The proposed HSS grant builds on the achievements of the current FYP, cMYP and ongoing HSS grant (2014-16).

Post 12th FYP, there will be no five-year plans. The Ministry of Finance (MoF) will henceforth carry out resource estimation for funding of various Central schemes and programmes as well as Central funding for the State/UT schemes/programmes. MoF will be guided by the Vision document being prepared by the NITI Aayog (which is the policy think tank for the Government), as this will help in setting out the resource priorities for the country. The budgeting exercise will shift towards a medium-term framework to give greater predictability to Ministries about resource availability.¹³ The NITI Aayog will be preparing a three-year action plan to accelerate economic growth and make it more inclusive, focusing on the health sector. The three year plan is required for going ahead with long term strategy of development.¹⁴ MoHFW will seek funds for the immunization programme under the resource envelope annually as per MoF's guidelines and processes.

The current HSS grant proposal goes beyond the 12th FYP. MoHFW will allocate funds for the programme as part of NHM and State PIPs. The vision document and the new cMYP (2018-2022) will be shared once finalized.

7. Monitoring and Evaluation Plan for the National Health Plan (Maximum 2 pages)

Provide **Mandatory Attachment #9: National M&E Plan (for the health sector/ strategy)**, as well as any sub-national plans, as relevant. If this does not exist, explain how the National Health Plan is currently monitored and provide a timeline for developing an M&E Plan.

Provide background information on the country M&E arrangements.

India has a robust M&E system at various levels for designing, implementing, data collection and analysis for various health programmes. Various bodies and committees have been established at national, states, district as well as local health facility level to regularly monitor progress and carry out mid-course modifications, if required. Any new health intervention is planned and operationalized based on evidence and in-depth consultations with various stakeholders. A systematic implementation and monitoring matrix is developed as an integral part of this planning process. A dedicated unit for statistics and data management has been established within MoHFW. Data collection is decentralized up to health facility level and data quality augmented by use of new tools and technologies. A brief description of existing mechanisms is given below:

1. NHM has established an ongoing system and institutional framework for monitoring the health programmes as follows:
 - a. A Mission Steering Group¹⁵ which exercises the main programme and governance function and approved financial norms for all schemes and components under NHM
 - b. An Empowered Committee¹⁶ which is the Executive Committee that examines all proposals under NHM before submitting to the MSG for approval.

¹³ http://finmin.nic.in/the_ministry/dept_eco_affairs/budget/budgetcircular2017-18.pdf

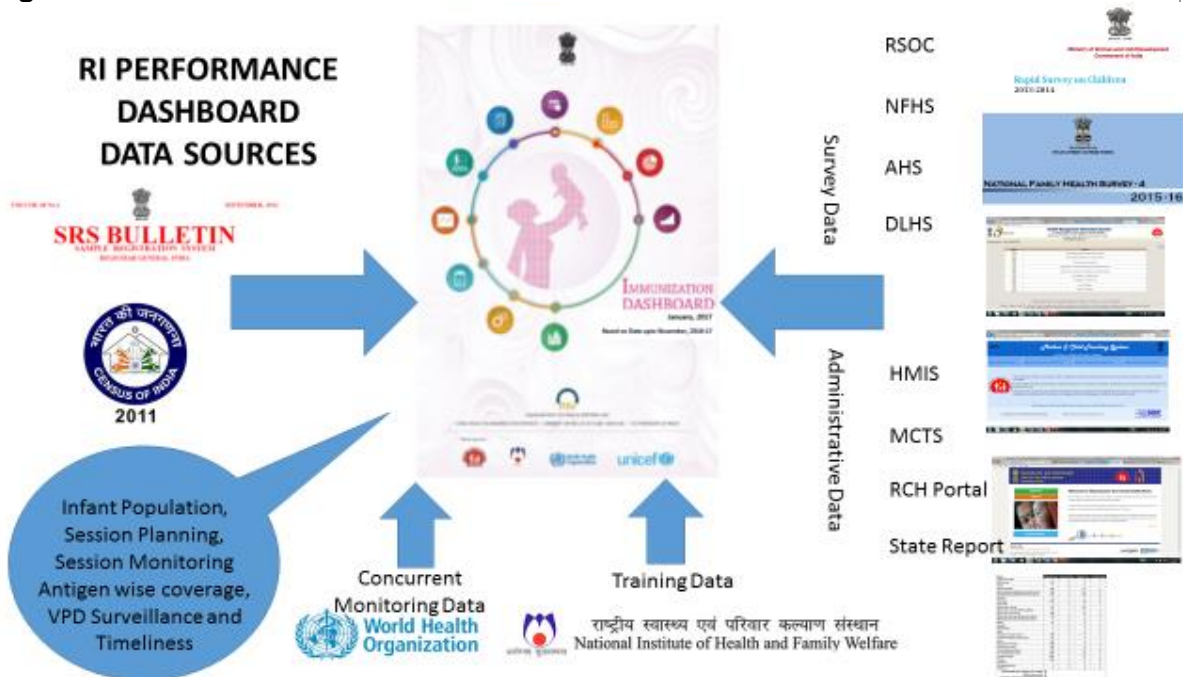
¹⁴ <http://health.economictimes.indiatimes.com/news/industry/niti-aayog-to-come-out-with-3-year-action-plan-soon/56490247>

¹⁵ MSG: <http://nrhm.gov.in/monitoring/mission-steering-group.html>

¹⁶ EPC: <http://nrhm.gov.in/monitoring/empowered-programme-committee.html>

- c. A web-based Health Management Information System (HMIS), which is used for monthly monitoring and reports on status of data up to sub-district level, compiles state-level analytic reports and fact sheets (prepared through triangulation of data from HMIS, Population Census, SRS, DLHS, etc.) and compiles NHM performance reports at national and state level on inputs, process indicators, outcome indicators (latest available reports of surveys/evaluations/SRS etc.)¹⁷. Based on HMIS data and inputs from monitoring of immunization data by partner agencies, an immunization dashboard is being prepared every month and shared with the States (**Figure 1**).

Figure 1: Data sources for Immunization dashboard



- d. At the State level, the State Health And Family Welfare Society under the State Health Mission reviews progress of NHM. The District Health Society is chaired by the District Collector, who reviews the programme at the district level. The District /City level Vigilance and Monitoring Committee (D/CLVCMC) monitors progress¹⁸. D/CLVCMC ensures adherence to fiscal norms, inter sectoral convergence, community participation and monitoring.

2. An Annual review of the NHM is carried out by the Common Review Mission (CRM) team comprising of Government officials, public health experts, and representatives of development partners and civil society organisations. Ten CRMs have been held since inception (10th held from 7-11 Nov 2016) in 16 States and UTs ¹⁹
3. The National Development Agenda has identified Health as one of the priority sectors. India is also signatory to the Sustainable Development Goals which has good health and wellbeing as one of its goals. In order to facilitate States in monitoring progress in health sector, the NITI Aayog and MoHFW have developed a composite health index (Health

¹⁷ HMIS: <https://nrhm-mis.nic.in/SitePages/Home.aspx>

¹⁸ DLVCMC: <http://nrhm.gov.in/monitoring/district-level-vigilance-monitoring-committee.html>

¹⁹ CRM: <http://nrhm.gov.in/monitoring/common-review-mission.html>

Index initiative). This composite health index (of which FIC is one of the intermediate outcomes) will be calculated and disseminated annually with a focus on measuring incremental improvement of states²⁰.

4. RI Review and Concurrent monitoring:
 - a. Regular review of immunization performance through STFI and DTFI) composed of representatives from government and other stakeholders as a mechanism for state and district level accountability. As of 31 December 2016, task forces have been constituted by all States and 97% districts, respectively.
 - b. Concurrent RI monitoring in high risk areas by independent monitors to assess critical gaps in programme implementation to guide corrective actions.
5. Periodic Independent Evaluations/Reports
 - a. The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout India. The survey provides national and state (district level data collected in NFHS 4) information for India on fertility, infant and child mortality, the practice of family planning, maternal and child health, reproductive health, nutrition, anaemia, utilization and quality of health and family planning services. Four NFHS rounds have been carried out so far²¹.
 - b. District Level Household Survey (DLHS) is a district level rapid household survey conducted in the country to estimate the service coverage and utilization of reproductive and child health services. State level DLHS 4 report for 21 States and Union territories and of DLHS 3 national level report are the most recent reports.²²
 - c. Coverage evaluation survey (CES) aims at collecting data on a wide range of indicators on maternal and child health with a special focus on RI.
6. Post Introduction Evaluation surveys after new vaccine introduction.
7. Others - Disease surveillance is being carried out for polio, measles, rubella, diphtheria, pertussis and neonatal tetanus, sentinel surveillance for rotavirus, invasive bacterial meningitis.

²⁰ Performance on Health Outcomes. A reference guidebook. NITI Aayog, Dec. 2016.

²¹ NFHS 4 : http://rchiips.org/NFHS/factsheet_NFHS-4.shtml

²² DLHS: <http://rchiips.org/index.html>

PART C: APPLICATION DETAILS

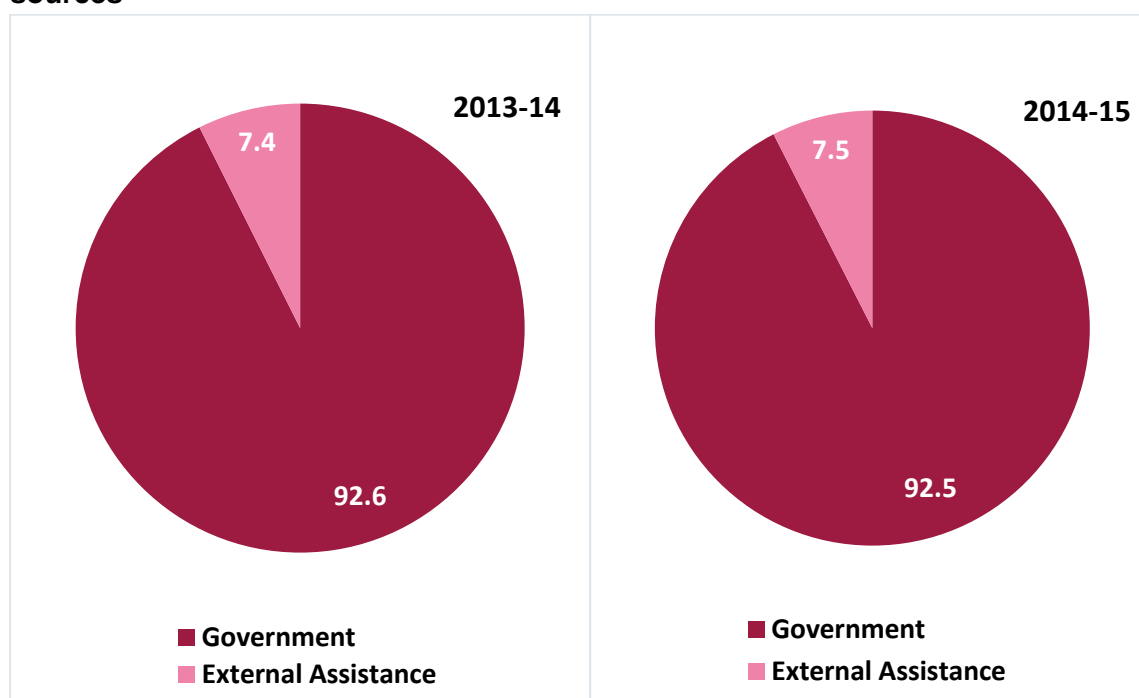
Section 8: Health System Challenges and Strategies to Achieving Immunisation Outcomes through Government and Gavi HSS and Financial Landscape (*Maximum 3 pages*)

Provide a situation analysis of the national immunisation programme with the main health system bottlenecks to achieving greater immunisation coverage and equity. Draw on existing reviews of cMYP and current HSS support, joint annual reviews, sub-national level survey and administrative data, and other relevant analyses. If such analysis has recently been conducted, attach **Optional Attachment 33: Health system bottleneck analysis**.

Describe the strategies to address these barriers, the priority areas/activities to support implementation of these strategies, and how these are being or planned to be funded (e.g. central and state governments, donors).

India's Universal Immunization Programme (UIP) is the largest in the world, with an annual birth cohort of 26 million and estimated budget of approximately USD 1219 million²³ (93% from GoI; the rest 7% is external support from various agencies including Gavi) (**Figure 2**).²⁴

Figure 2: Proportion of budget allocation for immunization by Government and External sources



UIP is an integral part of NHM, a single platform that was developed to bring together all national health efforts, with a current annual budget of almost USD 3 billion (USD 1= INR 65),²⁵ which does not include State budget for other health activities. A cMYP (2013-2017) provided the strategic framework for the last 5 years with emphasis on coverage and equity.

²³ cMYP 2013-17

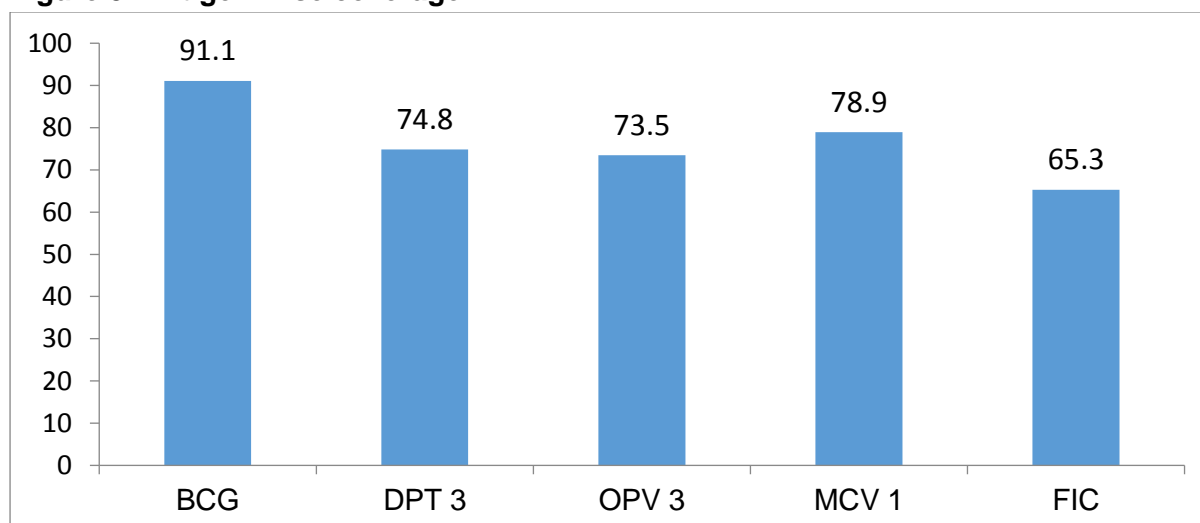
²⁴ cMYP 2013-17 mid-term review

²⁵ Union budget 2014-15

Under UIP, Govt is providing vaccination against several diseases, i.e. diphtheria, pertussis, tetanus, Hepatitis B and meningitis & pneumonia caused by Haemophilus influenzae type B (through Pentavalent vaccine), polio (IPV and bOPV), measles (two doses), severe form of childhood Tuberculosis (BCG) and, against Japanese Encephalitis in endemic districts. Rotavirus Vaccine has been recently introduced in eight states, and is expected to be scaled up in a phased manner to the entire country. Similarly, Pneumococcal Conjugate Vaccine (PCV) is expected to be introduced in early 2017. Measles Rubella (MR) campaign, initially conducted in the states of Karnataka, Tamil Nadu, Goa, Puducherry and Lakshadweep, will be expanded to the entire country in a phased manner (~410 million). Following the campaign, each state/UT will immediately introduce the vaccine into the RI programme.

FIC has improved over the last decade although the progress has been slow. As per a Rapid Survey on Children (RSOC 2013-14), FIC is 65.3% (Urban 72% Rural 62.4%). The coverage for each antigen is given in **Figure 3**. FIC (coverage of all antigens up to one year of age) increased from 44% in 2005²⁶ to 62% in 2015-16²⁷ as reported by national surveys.

Figure 3: Antigen-wise coverage



(Source: RSOC 2013)

There have been significant achievements on the national immunization landscape during the last five years:

- India certified polio-free on 27 March 2014
- By 2015, all states and UTs were validated for MNT elimination
- Analysis of concurrent monitoring of RI data for 8 Gavi states²⁸ shows that FIC increased from 64.1% in 2013 to 78.7% in 2016. This marked increase in coverage was also visible in high risk states of Bihar (from 65% in 2013 to 84% in 2016) and Uttar Pradesh (from 61% in 2013 to 74% in 2016).
- Five new vaccines introduced: pentavalent vaccine (scale up), inactivated polio vaccine (IPV), rotavirus vaccine, adult Japanese Encephalitis (JE) vaccine, rubella (MR campaign currently ongoing)

²⁶ National Family Health Survey 3 (NFHS 3). Ministry of Health and Family Welfare. Government of India. 2005

²⁷ Rapid Survey on Children (RSOC) 2013-14

²⁸ Concurrent monitoring data of routine Immunization. WHO-National Polio Surveillance Project (NPSP). India

- To rapidly increase FIC in India, MI was launched in December 2014 with an aim to achieve high quality RI coverage while contributing to HSS. Three phases have been conducted, focusing on 200-300 districts that have most of the unvaccinated or partially vaccinated children of the country.
- The measles rubella surveillance system is established in 36 states/ UT through a network of more than 41,000 reporting sites and 13 WHO accredited laboratories.
- Laboratory supported VPD surveillance for diphtheria, pertussis and neonatal tetanus established in four states (Rajasthan, Haryana, Bihar and Kerala).
- All states/UTs have constituted STFIs. 97% of districts have established DTFIs.
- SMNet scope of work expanded to focus on mobilization for RI in selected states.
- Media engagement for addressing vaccine hesitancy, used in polio programme leveraged to focus on RI.
- The National Adverse Events Following Immunization (AEFI) Secretariat has provided systematic support to the National AEFI Committee and the AEFI Surveillance programme.
- To further strengthen vaccine logistics and cold chain management, including vaccine temperature monitoring, an electronic Vaccine Intelligence Network (eVIN) was introduced in 12 states.

Gavi HSS 1 contribution:

India obtained Gavi support of USD 107 million for three years (2014-16) to support Gol's intensified efforts focusing on overall health system improvements through targeted support to strengthen RI and accelerate new vaccine introduction, in alignment with the national targets set by the RI cMYP. The implementation of Gavi HSS 1 funds played an instrumental role in programme implementation by triggering and facilitating the national processes to achieve wider health goals in the country in sync with addressing coverage and equity issues. Under Gavi HSS 1 funding, Gol implemented various RI intensification strategies focusing on five delivery areas that worked to improve institutional capacity, cold chain management, evidence-based policy-making and service delivery, as well as increase demand for vaccination under the UIP for achieving high coverage rates. Gavi funding has been catalytic in addressing these constraints and allowing the UIP to both increase coverage rates of RI and build the required infrastructure for introduction of new vaccines. UIP has now set a goal of 90% FIC by 2020.²⁹ With the launch of MI, the government aims at generating high demand for immunization services by addressing communication challenges; enhancing political, administrative and financial commitment through advocacy with key stakeholders; and ensuring that the partially immunized and unimmunized children are fully immunized as per the national immunization schedule. In addition, catalytic support was provided to accelerate the introduction of new lifesaving vaccines in the UIP, including Hep B, pentavalent and IPV, with plans for introduction of PCV, rotavirus vaccine, MR vaccine and other new vaccines. Through Gavi HSS1 funds, India has now been focusing increasingly on its efforts on hard to reach populations and addressing the coverage and equity agenda through evidence-based strategies. Midterm review of the cMYP 2013-17 showed results in this planning period, to which the Gavi HSS 1 funding contributed (**Table 1**).

²⁹ Operational guidelines for Mission Indradhanush

Table 1: Achievements on selected cMYP indicators, to which GAVI HSS 1 funding contributed

S. No.	Indicator	Baseline	Target	Achievements		
				2012-13	2013-14	2014-15
1.1	Number of states/UTs where >95% sessions were held as planned	20	30	20	25	28
1.3	Number (%) of states/UTs having <10% dropout from DPT1-DPT3 (or pentavalent)	25	NA	26 (74%)	31 (89%)	30 (83%)
	Total no. of States/UTs			35	35	36
1.4	% of Monitored Blocks where ANM Roster is a part of RI microplan	No baseline	NA	Data not available	91%	89%
	Total no. of blocks monitored			-	3388	7574
1.6	Number of states/UTs where all cold chain staff are trained in cold chain and vaccine management	10	All 36 States/UTs	10	16	19
2.1	Number of states where 80% of ASHA are trained in Behavior Change Communication	0	12 high priority states	4	8	9
5.1	Number of states/UTs where STFI is constituted to review RI program and take appropriate action	0	All States/UTs	30	33	35

To achieve this equitably, continuous and concerted efforts to overcome challenges, both within supply and demand side are needed, with a special focus on prioritized districts and populations such as urban, and minority and tribal populations based on coverage levels.

Health system challenges:

The Immunization programme is guided by a robust supervision and review mechanism, as detailed in section 7. However, despite increase in coverage, progress has been slow. Health system challenges have been identified from the findings of the 9th CRM, mid-term reviews of cMYP (2013-2017); Gavi HSS1 implementation, WHO concurrent RI monitoring in high priority states, and discussions at various stakeholders workshops held as part of the HSS2 proposal development process. The analysis presented here uses the health system building blocks framework to discuss the system level challenges for immunization and indicates the Gol's initiatives and proposed areas for system strengthening under Gavi HSS2 (**Table 2**).

Table 2. Health systems challenges against the buildings blocks framework

S.No	HSS building Blocks	Health System Challenges for Immunization	GOI/other partner interventions to address challenges	Gavi HSS 2 proposed area
1.	Health Services delivery	<ul style="list-style-type: none"> • Slow progress in FIC (1% increase per year) • High left out and drop out children • Inter and intra district variations in coverage • Weak RI microplanning • Weak supportive supervision • Increase in cold chain space requirement in concurrence with new vaccine introduction 	<ul style="list-style-type: none"> • MI intensified drive to rapidly cover unimmunized and partially immunized children along with RI system strengthening • Package developed for headcount based microplanning and trainings rolled out in few states • Monitoring and supervision tools revised for operational, cold chain and communication components • Order for new CCE placed including electrical and non-electrical equipment in sufficient quantity • Vision document NCCVLAP developed • Mechanisms established for assessment and projection of cold chain space need for new vaccines • Preventive maintenance guidelines and job aids provided to all districts/CCPs 	<ul style="list-style-type: none"> • Robust Micro plan: Microplanning package will be revised during HSS-2 based on field experiences • Strengthening Monitoring: SMO, FMs and EMs will continue monitoring on updated tools using new technology during HSS2 • Cold Chain Performance: Review the vaccine-cold chain system using global EVM tool and developing Improvement Plans; Strengthening of National institutes (NCCVMRC &NCCRC) established for vaccine logistics-cold chain; building capacity of Indian CCE industry;

		<ul style="list-style-type: none"> • Repair and maintenance (preventive and curative) of cold chain equipment • Weak stock management practices • Lack of robust temperature monitoring of CCE • Focus on information rather than behavior change (Vaccine confidence and generating demand) • Lack of supervision and monitoring for effective communication • Lack of strategic linkage between communication plan and RI micro plan 	<ul style="list-style-type: none"> • Skilled enhancement of cold chain technicians along with procurement of requisite spare parts and tool kits • eVIN rolled out in 12 states for real time stock management • Remote temperature monitoring with sim based temperature loggers across all CCPs in 12 states • Skills based training in socio-behavioral change communication in RI in 11 states • Specific state based SBCC strategy plans developed to increase demand in 9 states • Development of communication monitoring tool for MI and initiated for RI • Monthly dashboards of media monitoring • Development of district action plan for linkage between microplanning and communication plan during MI • Engagement of CSOs (Rotary and Lions club, AIH, faith based organization) in MI monitoring, community engagement in conflict 	<p>(CCE procurement by Gol, Major funding of Centers by Gol)</p> <ul style="list-style-type: none"> • eVIN Scale-up: eVIN to be expanded to remaining 24 States and Union Territories to optimize and strengthen the vaccine supply chain management practices at all levels through real-time stock visibility • Temperature monitoring: Nationwide scale-up of eVIN will have an integrated remote temperature monitoring through digital loggers to monitor vaccine storage temperature in real-time • Communication Micro plan: Communication planning linked with micro planning to reach high-risk/underserved through state SBCC cells • Enhancing supportive supervision: Close monitoring of communication initiatives
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		<ul style="list-style-type: none"> Limited strategic engagement of stakeholders including CSOs and media Vaccine hesitancy Awareness and information gap among caregivers 	<p>and hard-to-reach areas, and media engagement</p> <ul style="list-style-type: none"> Advocacy through professional bodies (IAP, IMA) Risk communication guidelines created, over 60 officials trained as government media spokesperson for AEFI RI campaign with celebrity designed and disseminated to promote RI and allay fears associated with adverse events Vaccine confidence study initiated Social media platform utilized to propagate the messages on RI and new vaccine introduction Improved budget planning in PIP 	<ul style="list-style-type: none"> Polio Assets: Effective use of Polio Network (SMNet) for RI health systems strengthening (In pooled funding support from Gol) Enhancing demand generation: Institutionalizing community-based multi-stakeholder partnerships; Strategic media engagement; Engagement of celebrities
2.	Human Resources	<ul style="list-style-type: none"> Shortage of human resources Rational deployment Capacity building 	<ul style="list-style-type: none"> Flexibility in NHM to hire on contractual basis Human resource management information system (HRMIS) being established in states MO handbook module revised and ToTs initiated Microplanning package developed and rolled out in 3 states 	<ul style="list-style-type: none"> Capacity building of Medical Officer: Regional and State ToT workshops during 2017-2019; Revision of handbook in 2019 and ToTs on revised module during 2020-21 (Capacity building of all Medical Officers by Gol funding) Capacity building on Microplanning: ToT on microplanning package and revision

			<ul style="list-style-type: none"> • Capacity building workshops on VPD surveillance in 4 states. • Health worker module under revision • Vaccine cold chain handlers module revised and ToTs conducted • Cold chain technicians trained on repair and maintenance of ILR and DF, WIC/ WIF along with development of new modules • Capacity building module on vaccine and cold chain management for managers based on global course • Deployment of vaccine cold chain managers across all districts in 12 eVIN implementation states • eVIN trainings conducted for web and mobile application at state, regional, district and CCP level • 1.2 million FLWs trained on IPC on RI • <i>Tarang</i> SBCC capacity building module developed for different levels of health service providers • Over 300 state based trainers and 1400 district based trainers of FLWs 	<p>of package (Capacity building of HW by Gol funding)</p> <ul style="list-style-type: none"> • Capacity building on VPD surveillance: States ToT for VPD surveillance will be undertaken in 15 new states during HSS-2 • Capacity building of Cold Chain Handlers: ToT for CCH along with development of revised module (Capacity building of CCH by Gol funding) • Capacity building of Cold Chain Technician and Mangers: Hands-on training at National centers for repair and maintenance and vaccine-cold chain management • Deployment of VCCM under eVIN: As part of eVIN scale up, a dedicated Vaccine Cold Chain Manager will be placed at each district with capacity built to support DIO in vaccine-cold chain management • Capacity building of CCH on eVIN: All Cold Chain handlers across all newer cold chain points, District , Regional and State level to be trained on eVIN
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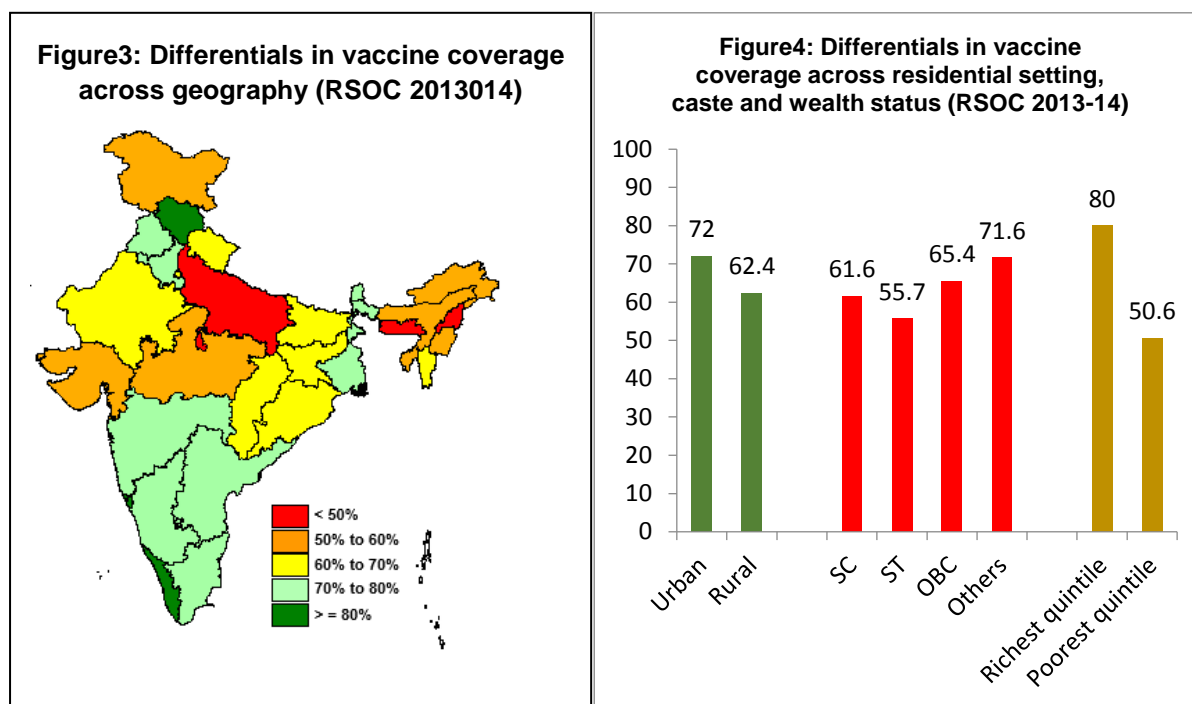
			<p>trained on SBCC, training, planning and supervision</p> <ul style="list-style-type: none"> • Media capacity building module for health reporting developed with Reuters foundation for working media and media students including Urdu media • Radio RJ at national and state and district levels trained for creatively disseminating messages on RI 	<ul style="list-style-type: none"> • Capacity building on Communication skills, planning and supervision: ToTs for capacity development for FLWs /providers on SBCC and IPC (Capacity building of all FLWs through GoI funding) • Capacity building of media and spokesperson • Continuous Knowledge update of various Health Officials: An interactive package called RISE will be developed for continuous and an adaptable knowledge update of various health officials based on self-learning methodologies, peer-to-peer, classroom, on-site supervision support, and e-learning.
3.	Health Information System	<ul style="list-style-type: none"> • Timely availability of data • Data completeness, accuracy and consistency • Data review for programmatic action • Limited availability of quality VPD surveillance data 	<ul style="list-style-type: none"> • DQA done in three states and improvement plans disseminated • Monthly dashboards (including communication) prepared and disseminated to states and partners • STFI/ DTFI mechanism for data review being strengthened eVIN and NCCMIS systems established to manage vaccine logistics and cold chain domains respectively. 	<ul style="list-style-type: none"> • STFI and DTFI will be tracked during HSS2 • Communication monitoring and supportive supervision through use of standardized formats, dashboard analysis strengthened • Media monitoring and analysis • Introduction of ANMOL to improve data collection and management

			<ul style="list-style-type: none"> • Convergence with IDSP and ICMR lab networks for VPD surveillance initiated 	<ul style="list-style-type: none"> • NCCMIS augmentation and Immunization Supply Chain-Cold Chain data harmonization • eVIN scale-up across all the cold chain points in the newer states (along with those that were covered under HSS 1) will provide programme managers at all levels a real-time visibility of vaccine stocks and storage temperature. • VPD Surveillance: Expansion of VPD surveillance to 15 new states planned under HSS-2
4.	Equitable access to vaccines	<ul style="list-style-type: none"> • Significant differential in immunization coverage in urban poor and tribal population 	<ul style="list-style-type: none"> • NUHM implemented and urban primary health structures including human resources being strengthened • Urban/ city task force on immunization is being created • Coordination meetings with NUHM and Immunization division being held regularly • Ministry of Tribal Affairs is providing focused approach on integrated socio-economic development including health 	<ul style="list-style-type: none"> • Urban Immunization: Facilitate establishing Urban/ city task force; meetings will be tracked; 10 cities will be supported as pilot to address coverage and equity using polio and MI experiences. • Tribal Immunization: Review of bottlenecks and challenges related to immunization programme in tribal population followed by development of a tribal immunization strategy through multi-stakeholder consultation and limited implementation. (Roll out of tribal strategy through Gol funding)

			<ul style="list-style-type: none"> Data on immunization being shared with Ministry of Tribal Affairs 	
5.	Health Financing System	<ul style="list-style-type: none"> Transitioning from National five year plan to Developmental plan Adequate fund availability for new vaccines and associated logistics including CCE Funding requirement for sustaining useful interventions institutions created Fund utilization at sub-national level 	<ul style="list-style-type: none"> Immunization division ensures allocation of fund in the annual health sector budget as per procedures laid down by Ministry of Finance. Need based funding under NHM based on programme implementation plans (PIP) of the states Sustainability of new vaccines and provision of required CCE ensured through budgetary projections 	<ul style="list-style-type: none"> Catalytic funding from Gavi in key priority areas such as capacity building, monitoring, data management, vaccine logistics and cold chain management, surveillance etc. Improved communication budget planning for PIPs during district planning
6.	Leadership and Governance	<ul style="list-style-type: none"> Inadequate and infrequent programmatic review at various levels of implementation Inadequate inter-sectoral convergence for programme delivery Absence of a specialized health communication cadre 	<ul style="list-style-type: none"> Accountability framework in form of IAG, STFI, DTFI etc. and regular feedback at various levels initiated District level /City level Vigilance and Monitoring Committee (D/CLVCMC) ensures adherence to fiscal norms, inter sectoral convergence, community participation and monitoring. Capacity building in SBCC at various levels of existing human resource 	<ul style="list-style-type: none"> eVIN scale up across the newer states is aimed to strengthening programme governance with data visibility and informed decision-making taking place at the last-mile of programme implementation – the cold chain points and districts. eVIN also provides greater transparency and accountability in the system that will help existing review mechanisms like District and State Task Force on Immunization etc.

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Disparities in immunisation coverage exist for different population groups and across geographies (**Figures 3 and 4**). Further analysis of partially and non-immunized children based on WHO concurrent monitoring data show that urban (poor) and Muslim households report lower rates of coverage (**Figures 5 and 6**) and seem most disadvantaged than any other group. Similarly, coverage data from a national survey shows significant differential (~10% points) in immunization coverage among tribal populations when compared to the national average.³⁰ The urban, Muslim households and tribal population constitute 31.2%, 14.2% and 8.6% of the population. These suggest the need for special focus and targeted strategies that are required to reach these groups of unreached children.



WHO's routine monitoring data from 2015 (**Figure 5, 6 and 7**) provides information on the proportion of fully (78%), partially and not immunized children among the sample of 2.16 million children from 395,000 monitored sessions across 8 high priority states (covering 85% of the country's population). It also provides some insights in to reasons for partial and non-immunization, which show that almost 65% of reasons are related to lack of information about immunization; 12% due to operational gaps, both of which can be affected by both supply and demand side interventions. Further analysis of partially and non-immunized children show that urban and Muslim households report lower rates of coverage (**Figure 6 and 7**) and seem most disadvantaged than any other group. Similarly, coverage data from a national survey shows significant differential (~10% points) in immunization coverage among tribal populations when compared to the national average.³⁰

³⁰ Rapid Survey on Children (RSOC) 2013-14
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Figure 5: Reasons for Partial immunization

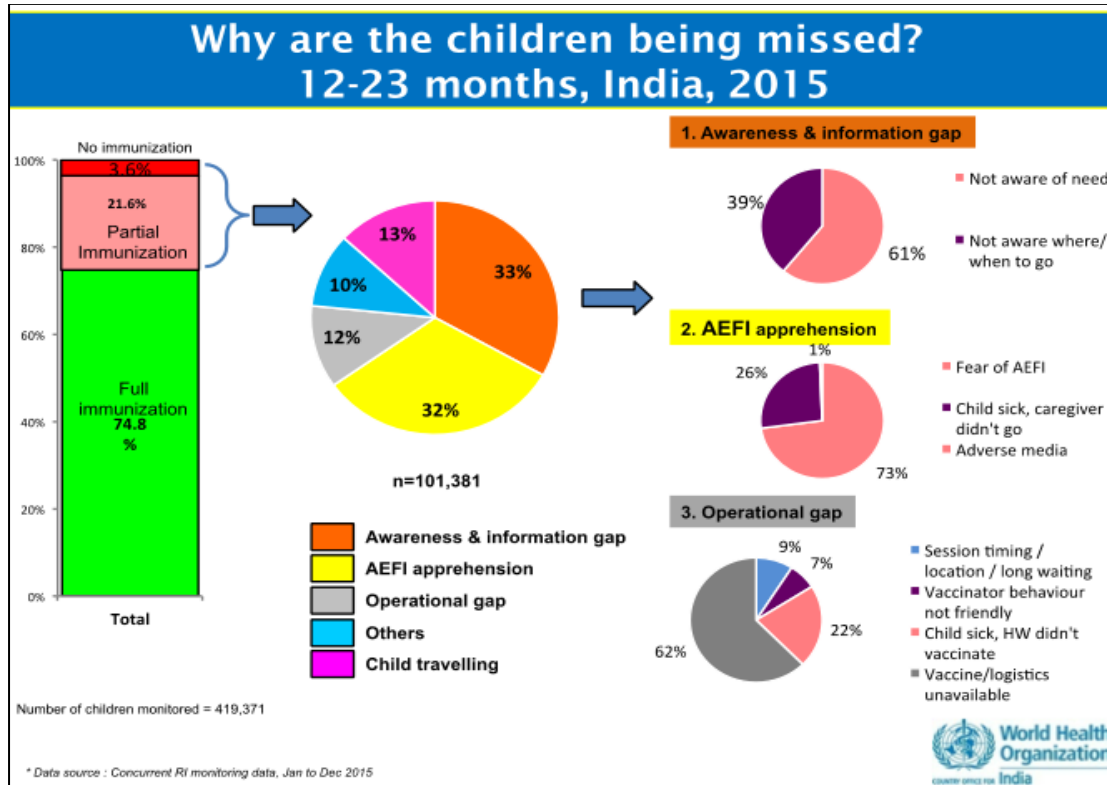


Figure 6: Proportion Partial immunized among various groups/settings

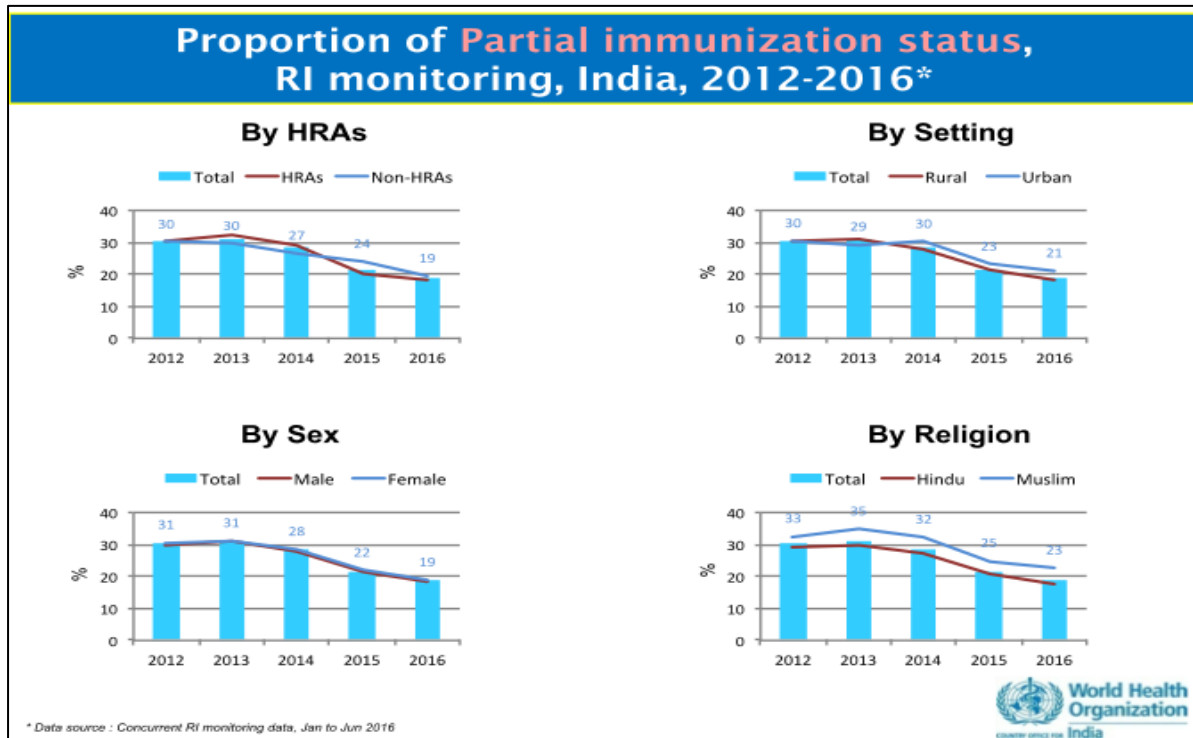
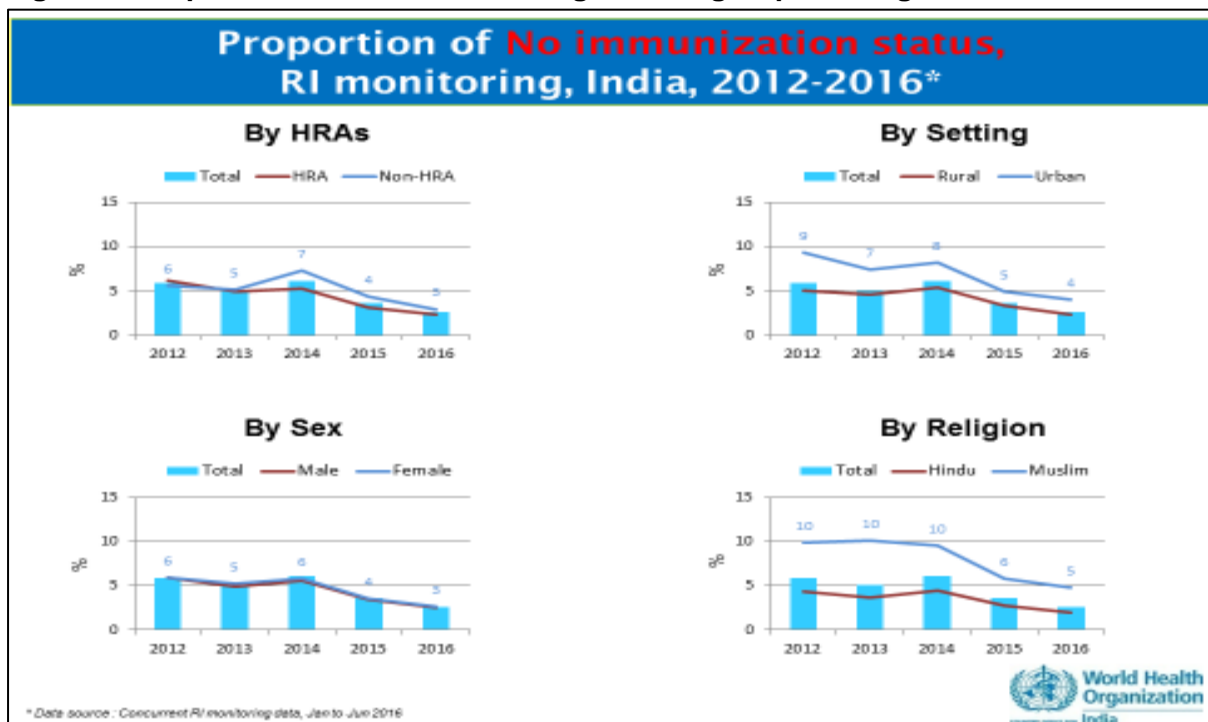


Figure 7: Proportion unimmunized among various groups/settings



Specifically, the prioritized areas under Gavi HSS2 include:

Capacity of Data reporting systems and analysis

High quality data availability is a prime requirement of a functional immunization programme. This also ensures that gaps and information on missed sessions and high risk areas are captured and the immunization programme delivery can then be focused on reaching the unreached populations. In view of this, Gavi HSS 2 support will focus on:

1. Continuing concurrent routine monitoring of immunization as it is a critical activity that provides data on immunization coverage especially in hard to reach areas in addition to other immunization related variables. This activity supported by WHO-NPSP remains a high priority activity for the government and it supports the Polio transition plans of WHO, where in NPSP staff will allocate more of their time towards RI activities.
2. India currently has limited capacity for VPD surveillance. Surveillance of VPDs along with polio and measles will help identify pockets of un-immunized children. Using the AFP surveillance network it will ensure that high risk areas are covered; use of existing seven laboratories across the country would minimize the need for setting up new VPD surveillance laboratories, and the focus can be on strengthening capacities of these laboratories. Initiating and sustaining VPD surveillance would require capacity building for identification and reporting of diseases along with support for laboratory strengthening through training and capacity building of staff for data management and analysis.
3. Availability of multiple sources of data at field level, with various data recording tools used by health workers results in inconsistent information. A unique single recording system at the first level of data using new technology may be useful. Such a system would not only reduce burden on health workers, but it will also enable them to prepare work plans and immunization due list with ease. ANM online (ANMOL) was piloted in Rajasthan and based on the results, it is now scaled up in state of Andhra Pradesh. Based on the success in Andhra Pradesh, plans for nation-wide scale-up is underway, with some support expected from external funds for purchase of tablets in few states.
4. An immunization specific national survey, would be helpful in documenting the impact of various immunization strengthening activities and special initiatives like MI. In addition, such a survey could be useful in identifying factors hindering and aiding immunization efforts. Under Gavi HSS1 some of the activities were supported or initiated. New priorities include a national survey and use of new technology for field level entry of health information by health workers.

Capacity of Human Resources for Service Delivery

More than 9 million immunization sessions are planned each year in the country. This requires a large infrastructure of well-trained HR across all levels. The recent review of the cMYP (2013-17) identified significant gaps in the training of health workers and mid-level managers. Given the large numbers of workers, cascade level training is often planned, as it is most feasible and economical to reach this large workforce. However, it requires well-trained master trainers at various levels of system. National-level performance assessments undertaken to assess the quality of last phase of training activities for medical officers and health workers

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revealed gaps in the availability of trained master trainers^{31,32}. National, regional and state level workshops thus would be required to train a pool of medical officers as master trainers on immunization handbooks. Given the proposed introduction of new vaccines, there is also a need to revise the handbook on immunization for both medical officers and health workers.

On the other hand, there is also an increasing recognition that upgrading the knowledge and skills of all health personnel down to frontline health workers (FLWs) must keep pace with changes in the immunization programme, introduction of new vaccines, new technology, etc. With a primary healthcare workforce, consisting of more than 915,000 ASHAs, 200,000 ANMs and nearly 30,000 Medical Officers, the standard cascade based training mechanism can usually reach personnel only once in 2-3 years. Moreover, a single exposure to new guidelines during instructor-led trainings may not always be sufficient to bring about the desired change in knowledge, and skill and behavior of the health workers, as also learnt from the polio experience. Thus, it is imperative that innovative mechanisms to improve information transfer and to build skills are developed that are relevant, efficient, reliable and replicable.

Priority areas to address include:

1. Training of medical officers across national, state and district levels on immunization as master trainers is required as Training of Trainers (ToTs) is an important activity to ensure efficient service delivery. Given the plans for introduction of new vaccines, immunization handbooks, both for medical doctors and for health workers require revision.
2. Micro-planning for RI is a lesson learned from polio eradication efforts, that helps address inequity in coverage. For meticulous planning of RI sessions and for effective identification and mobilization of beneficiaries, the programme envisages bottom-up planning ensuring that all areas including wards/hamlets under each health post/sub-center are enlisted with correct estimation of beneficiaries through headcount survey, including appropriate planning for HR and vaccine/other logistics. The state and district level ToTs taken up in 2 Gavi states as part of Gavi HSS1, need to be expanded to other high priority states to help reach unreached populations such as minority, urban poor, and tribal populations.
3. In addition to cascade training, providers could benefit from e-training and m-training platforms that would both apprise them with the latest developments in the immunization programme and help them to upgrade their skills. Such supplementation of cascade trainings with innovative mechanisms through e-learning and m-learning platforms would improve information transfer and build skills among workers.
4. Addressing inequities for urban and tribal populations: The latest monitoring data indicate significantly lower immunization coverage among these groups. Analysis of un-immunized and those partially immunized mainly constitute of these populations along with minority populations. The NUHM and Ministry of Tribal Affairs have large budget outlays and could benefit from innovative and sustainable interventions and support activities that would help address the low immunization coverage among these populations. Creation of urban task forces, identification of vulnerable populations and areas, development of appropriate strategies and intervention plans, training of existing urban programme staff on micro-

³¹ Evaluation of Immunization Training of Medical Officers, Cold Chain Handlers and Technicians (2012).

³² Performance Assessment of Health Workers Training in Routine Immunization in India (2009).

planning, programme implementation, use of technology for tracking/tagging of urban slum and migrant population; monitoring of these activities; use of interpersonal communication tools for demand generation, have use potential in producing results. Similarly for tribal populations, pilot testing of feasible and sustainable strategies in a few states with high tribal population may be required.

To ensure sustainability, across all trainings (for medical officers, cold chain handlers, data managers etc.) supported through HSS2, government rates of reimbursements will be used.

Capacity of Cold Chain and Vaccine Logistics

Cold chain and vaccine logistics is the backbone of the immunization programme. With introduction of new vaccines, it is both programmatically and financially critical to ensure the health of the cold chain and of the vaccine so that equitable vaccine coverage is made possible through required investments in cold chain and vaccine logistics systems. Concurrent monitoring has identified unavailability of vaccines (at immunization sites) as a major reason for the 12% operational gap cited for partial and no immunization (Figure 5). Systematic efforts to identify gaps and address issues in cold chain and vaccine logistics management have been conducted in recent years which have identified some key challenges in this area. A national level Effective Vaccine Management (EVM) assessment has been conducted under HSS1 in 2013 after lacunae were found related to capacity at national level, and vaccine and cold chain management. In the past 3-5 years, substantial progress has been made, however much more is required to make the cold chain system of India more reliable and efficient.

Table 3: Summary of consolidated EVM criteria indicator scores (EVM assessment 2013)

S.N.	Criteria	Consolidated Scores					
		GMSD (4)	SVS/RVS (18)	DiviVS (14)	DVS (28)	HF (52)	National Average
1	Vaccine Arrival Process	52%	34%	NA	NA	NA	43%
2	Vaccine Storage Temperature	37%	43%	46%	71%	70%	54%
3	Storage Capacity	71%	66%	46%	57%	76%	63%
4	Building, Cold Chain Equipment & Transport	65%	64%	69%	70%	75%	69%
5	Maintenance & Repair	59%	61%	59%	58%	49%	57%
6	Stock Management	57%	56%	49%	46%	45%	51%
7	Distribution	24%	41%	39%	42%	77%	45%
8	Vaccine Management Practices	29%	50%	35%	47%	67%	46%
9	MIS & Supportive Functions	50%	65%	52%	58%	0%	56%

Red - <60%, Black - 60-79% and Green - >80%

Although India has sufficiency in numbers of cold chain points (1 per 47,000 as against 1 per 50,000 population recommended), irrational distribution, lack of trained HR and inconsistent electrical supply are key bottlenecks affecting health of cold chain and vaccines. An eVIN baseline data on all CCPs collected by UNDP in three states shows that in Uttar Pradesh around 88%, in Rajasthan around 10% and in Madhya Pradesh around 46% of CCPs cater to the population of more than 50,000. There is a need to optimize the geographical distribution of cold chain points based on relevant data. Data from National Cold Chain Management Information System (NCCMIS) indicates that in India out of 28,241 CCPs 25,831 are functional. Electricity supply is also a critical factor for the functionality of Cold-Chain points. Temperature monitoring for Ice-lined refrigerators (ILR) and Deep Freezers (DF) is based on a system of manual measurement using thermometer and precludes real time temperature monitoring of cold chain equipment for immediate corrective actions.

In 2012-13, UNICEF supported Gol in developing and expanding a management tool for cold chain, the National Cold Chain MIS (NCCMIS). This served as a platform to make corrective decision, monitor the sickness rate of cold chain equipment, planning and allocation of new equipment and aligning the new vaccine introduction with cold chain availability. But, it requires regular updating to make it more user friendly and to maintain accuracy of information.

Another area that requires attention is the maintenance, breakdown, repair and monitoring of cold chain system at every level. To achieve this, cold chain technicians (CCT) and other human resources especially at the supervisory level are a must. Availability of critical HR at various levels³³ has been a major bottleneck. Training of existing staff on cold chain repair and maintenance is thus a critical need.

UNICEF under the Gavi HSS1 grant partnered with two government institutes to develop the National Cold Chain & Vaccine Management Resource Centre (NCCVMRC) at Delhi and the National Cold Chain Resource Centre, NCCRC, at Pune as the two apex institutes to manage all activities related to immunization supply chain-cold chain, especially for training of various cadres of CCL staff. Continued support of these institutes would be required to make them regional centers of excellence and thus making the government system self-sustainable.

India is one of the largest vaccine manufacturers and exporters in the world but the presence of vast Indian refrigeration industry in immunization programme is totally missing. The national immunization programme is dependent on imported devices leading to issues of repair, maintenance and availability of spare parts. UNICEF, under the Gavi HSS1 grant, took the first step to sensitize Indian manufacturers on the vast potential of the immunization programme, especially the WHO Pre-qualification standards (PQS) procedure and standards. Continued support in this area is envisaged so as to initiate manufacturing processes in India.

Equally important are the vaccine logistics and temperature monitoring system, which has significant challenges. These include poor record keeping across most vaccine points, improper vaccine distribution leading to poor vaccine stock management that affects viability

³³National Cold chain assessment 2014
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of vaccines. Without real time data on vaccine availability or cold chain temperatures, programme managers at national, state and district have little information to manage the supply side of vaccines, perform course corrections or ensure accountability from those further down the chain. These constraints have led to high breakdown rate of equipment, overstocking and stock outs, inadequate monitoring and supervision, poor management and the possibility of AEFIs thus hampering improved vaccine coverage.

eVIN is now being introduced in 12 states (by December 2016) which provide a robust decision making tool for programme managers and policy makers to plan for optimal vaccine stock distribution through information on locations, stocks and vaccine temperatures. Analysis of data from past 6 months of eVIN roll out in 3 states has shown significant improvements in vaccine monitoring. Thus, an introduction of this new technology across all states supported through external technical and financial resources, which can then be transitioned to Gol, would be very important.

Specific challenges that are expected to be addressed through Gavi HSS2 funds include:

1. Expansion of effective vaccine intelligence network (eVIN): eVIN is now an approved system for implementing the vaccine and cold chain MIS across the country. It has become a decision making tool for programme managers up to district to improve overall efficiency and effectiveness of vaccine delivery and temperature monitoring. Analysis of data from past 6 months of eVIN roll out in 3 states has shown significant uptake of the programme; significant reduction in stock outs; visible improvement in use of open vials in many CCPs; remote temperature monitoring for all CCE with automated alert mechanisms and their escalation levels (to higher authorities) ensuring a rapid response time. Thus, it is envisaged that through Gavi HSS2 funds, this technology can be introduced in rest of the states, which will provide a real time visibility of all vaccine stocks along with their actual storage temperatures. This catalytic use of Gavi funds will ensure that once established, this technology will be fully supported by Gol funds, as has been the case of various other new initiatives.
2. Low HR capacity for repair and maintenance of cold chain systems across various cadres of workers: Trainings to improve capacity is urgently required along with scale up of the Vaccine Management Course (VMC).
3. Harmonization of cold chain and logistics data generated across eVIN, NCCMIS, along with immunization monitoring data is identified as a priority for efficient decision-making. Use of Gavi HSS2 funds will catalyze the development of a triangulated source of cold chain data, housed within the national institute (NCCVMRC).
4. Review of EVM and improvement plans: New EVMs and follow up EVMs and development of improvement plans are required. Use of Gavi HSS2 funds is expected to support some of these activities.
5. Institutional strengthening of the two institutes that were set up by Gol through support from Gavi HSS1 funds, NCCVMRC and NCCRC is required before they can be fully transitioned to Gol funds. There is lack of capacity among Indian manufacturers to develop cold chain equipment, mainly due to lack of awareness of the market size and of the WHO pre-qualification standards. Some supportive activities to build these capacities are identified as high priority activity under Gavi HSS2 support.

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Communication and Demand Generation

Among the many factors that influence immunization coverage, the one that stands out is demand that is negatively influenced by “*poor understanding and misconceptions about immunization in the community, fear of AEFI and communication materials not displayed at the session sites.* (ANM Immunization handbook 2016)”.³⁴ Also, the most recent concurrent monitoring data showed that demand side factors – lack of awareness and information gap and apprehension about AEFI (Figure 5) accounted for 65% of reasons for partial or no immunization. Further analysis of reasons for lack of awareness and information gap suggest, that a majority (61%) were not aware of the need to take their child for immunization, and others (39%) did not know where or when to go. As for ‘AEFI apprehension,’ 73% said it was their fear of AEFI (Figure 5). A formative study in October 2015 prior to the introduction of IPV in UP, Bihar and TN revealed that parents are either not aware or do not understand the role of immunization in preventing diseases.³⁵ Findings also indicate rural women had disadvantaged access to information due to limited access to television, radio or the mobile phone. ASHA or community mobilizer was the critical push factor for ensuring immunization acceptance and the uptake of RI services. Appropriate training of this cadre of workers enabling them to provide the required information to households is thus an important activity. In addition, partnerships with CBOs and CSOs to provide services in hard to reach populations are critical and needs to be institutionalized.

Over the years, there is better acceptability for going beyond traditional information, education, and communication (IEC) activities. There is now a clear understanding for creating an enabling environment and demand generation interventions that are underpinned in enhanced social and behavioral change communication (SBCC). However, limited investment through PIPs for implementing demand generation activities (social mobilization and IPC), inadequate structures and accountability across state, district, and block levels for SBCC/communication/IEC activities remain a concern.

Another gap seems to be lack of linkages between communication plans and RI micro-plans developed to reach minority and underserved populations. Capacity building efforts often initiated by different groups thus needs to be coordinated such that health workers obtain clarity regarding their planned tasks associated with micro-plans and SBCC interventions.

Vaccine confidence and hesitancy by parents and caregivers³⁶ towards vaccine (one of the major factors for partial or no-immunization) can also be addressed through strategic and appropriate media engagement at local levels. The overall situation of media reporting on public health issues in general and especially RI is “news” oriented and event-based. It lacks

³⁴ Coverage Evaluation survey 2009

³⁵ Perception of healthcare providers and community towards RI and IPV

³⁶ Evidence also shows that while awareness may have been raised, IEC efforts have stimulated very little increase in the desired and sustainable positive behaviours and practices. In a KAP (2010) study related to immunization practices (with special reference to polio) carried out by UNICEF and MOHFW revealed that while 96% of mothers and 89% fathers in Uttar Pradesh had heard about child RI, the RI coverage in UP is as low as 41%. The *CES of 2009* revealed that despite awareness, a majority of mothers did not *feel the need for vaccinating their children.*

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the comprehensive understanding of larger development goals and public health perspective. A concerted effort to sensitize media personnel to clear and evidence based reporting is required.

Demand side interventions that are integrated within the health system structures ensuring accountability at all levels are thus needed to strengthen RI. As per cMYP-MTR, while efforts have been made to build the capacity of state and district programme managers in communication planning and communication with media regarding AEFIs, outcomes of these interventions was difficult to measure as the monitoring mechanism for this purpose is yet to be established. Clear linkages between demand generation interventions and immunization outcomes needs to be established through the use of appropriate monitoring and evaluation tools.

Gavi HSS2 funds are expected to provide support for continuing many of the activities undertaken during HSS1 and provide support for Polio transitioning of the Social Mobilization Network (SMNet) in select states.

Demand side barriers that are to be addressed through Gavi HSS2 support include:

1. Lack of HR capacity for SBCC/communication/IEC activities: Focus would be to train master trainers at the district level (including CSO partners) who can then train the FLWs.
2. Communication planning and their linkages to micro-plans through SBCC cells to reach underserved populations is weak: focus would be to strengthen these linkages.
3. Role of media and mass communications: Focus is to create an enabling environment that supports immunization programme. Negative media reports hamper the programme, thus building capacity of both media persons and communication teams to deliver appropriate positive messages. Gavi HSS2 focuses on strengthening these networks and use of celebrities to advocate for immunization.
4. Effective use of Polio assets (SMNet): These assets are now integrated within the strategies for RI health system strengthening. SMNet deploys community-level mobilizers in areas identified as high-risk areas to improve community engagement and social mobilization. Gavi HSS2 will support transition plans along with Gol support.
5. Partnership with CSOs: Challenges in partnerships with civil society and private sector exists. Focus of Gavi HSS2 would be to develop guidance and procedures that improve and facilitate CSO engagement and institutionalization of partnerships at multiple levels (State and District).
6. Monitoring of communication and demand generation activities through use of standardized formats, dashboard analysis: An important activity that started for MI, resulted in increased focus and data on these activities, along with improved communication plans.

Gavi HSS2 funds is thus expected to provide continued catalytic support to many of activities that were initiated through Gavi HSS1 funds and for various new activities to address immunization bottlenecks. This continued support along with Gol's commitment to sustain them after Gavi HSS2 support will ensure that these proposed investments will lead to a strengthened health system which in turn will result in increased and equitable immunization coverage in India.

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Financial landscape

Under UIP, immunization services are provided free of cost to all beneficiaries across the country. National government is the major contributor (93%) to funds for implementation of UIP. Major partner agencies that also provide financial assistance for implementing UIP include WHO, UNICEF, BMGF and Gavi.

At national level, funds for immunization are provided through NHM and at the state level they are provided on the basis of Project Implementation Plans of the State. The cMYP mid-term review undertook a costing analysis for the review period to compare the actual expenditure with the projected expenditure. Data received from national government and partner agencies was analysed under the broad categories - vaccines and supplies, supplemental immunization activities (SIAs), purchase of cold chain equipment and cold chain maintenance, training, evaluation and programme review, incentives for ASHAs, purchase of vaccine vans, expenditures for GMSDs, research studies, advocacy and communication, supportive supervision, disease surveillance, etc. The average expenditures per year for vaccines, personnel, and shared personnel have increased during the period under review.

India is currently in a phase of policy transition, and financial projections for Gavi HSS2 period are not available. Governments will continue to fund most activities through domestic funding as per guidance and processes laid down by MoF. Historically, GoI has continued all previous Gavi-funded activities through domestic funding once the project period was completed.

Section 9: Objectives of the NHSP and application (*Maximum 2 pages*)

Present specific objectives to address the identified bottlenecks, explaining how each aligns with objectives in the cMYP and/ or specific health system strengthening policies/ strategies being implemented, or how the objective relates to the identified equity and gender related barriers. These objectives have to be listed in the same order in **Attachment #6** - Detailed workplan, budget and gap analysis.

If the proposed HSS grant will focus on specific geographic areas (for example, low coverage areas or hard to reach areas), specify these geographic areas and provide rationale of their selection.

The broad objectives thus for HSS 2 are:

Objectives	Description
Objective 1	To strengthen and maintain robust data systems to improve evidence based decision making.
Objective 2	To improve capacity of human resources for service delivery and programme management for equitable and efficient immunization services.
Objective 3	To strengthen vaccine logistics and cold chain management through improved data systems, infrastructure strengthening and human resource capacity
Objective 4	To improve demand generation for immunization services to improve coverage and address inequities.

Section 10: Description of activities (*Maximum 3 pages*)

*Describe the key activities which will lead to achievement of objectives set out in Question 12. Please ensure that the activities described align with the activities that are included in **Attachment #6** - Detailed budget, gap analysis and work plan.*

On “sustainability considerations”, describe how the government is going to ensure programmatic and financial sustainability of the results achieved by the Gavi grant after its completion. If the country requests recurrent activities, describe steps to reduce further reliance on Gavi funding for recurrent costs.

Gavi HSS2 support for USD 100 million over a 5-year period follows the HSS1 support for USD 107 million from 2014 to 2016. India will however transition out of Gavi support by 2021. This proposal is being designed with interventions in mind to ensure successful transitioning and sustainable outcomes after Gavi support ends – with strengthening of government capacities, building of CSO capacities, establishment of local partnerships, aligning cost structures with government norms, developing guidelines and tools, achieving efficiency gains, etc. Since the focus of the activities prioritized under Gavi HSS2 is to increase coverage and reduce inequities, many of Gavi HSS2 activities would be focused on high priority states, including the north eastern (NE) states of India. However, the selected states vary across objectives and activities and details are annexed in table on geo-scope (**Annexure 1**).

The details of proposed list of activities planned under each of the objectives, along with linkages to HSS1, wherever applicable, along with their sustainability plan is provided below.

Objective 1: To strengthen and maintain robust data systems to improve evidence based decision-making

Activity 1.1: Sustaining RI monitoring to improve the quality of immunization services (WHO)

MoHFW is focused on improving programme supervision and monitoring for RI at all levels, with special focus on hard-to-reach areas and tribal populations, using data generated in the programme and through field monitoring. RI partnership in the country is actively participating in monitoring of implementation at field level and assisted states in involving their programme managers and staff in the monitoring. However, lack of real-time data affects planning and decision-making process and is an urgent need in the system which in some ways is met by the **Concurrent Monitoring** activity in high risk areas is currently being supported by the WHO National Polio Surveillance Project (NPSP) staff across the country in 20 states.

Considering the wide divergence between reported and evaluated coverage, concurrent monitoring has assumed great importance for immediate corrective actions and remains a high priority for government. The data generated through concurrent monitoring provides accurate information on level of involvement of government in RI, areas missed, reasons for low coverage and quality of social mobilization activities. In concurrence with MoHFW, other partner agencies and CSOs-technical, WHO NPSP updated and circulated the ACCESS-VB based data tool – Intensified RI monitoring to all states through GOI to capture RI monitoring data. RI monitoring tools were also revised in 2016 as per the current programme needs.

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MI was also supported by NPSP staff with intensive planning, training and monitoring of these drives and real-time feedback was shared with government to ensure immediate corrective actions. Continued support for RI monitoring through NPSP is envisaged as a priority.

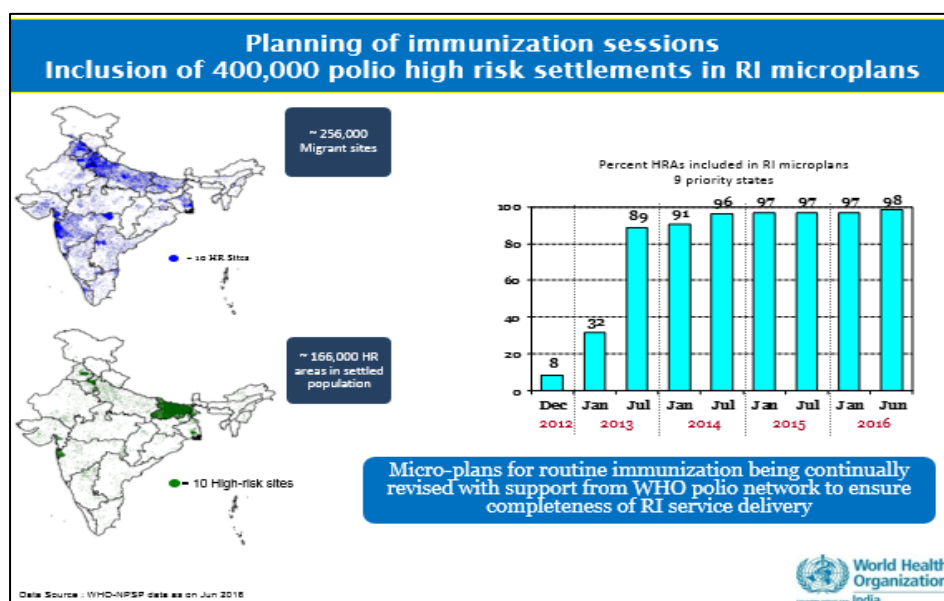
Linkages to HSS1

Using the Gavi HSS1 funds, India made concerted efforts in institutionalizing a robust RI monitoring mechanism leveraging the polio infrastructure to ensure effective functioning of immunization systems. This endeavour will help the government to strive towards strengthening health and equity in the country as we aim to reach more than 90% of all children with age-appropriate vaccines.

With interventions undertaken using GAVI HSS1 funds, WHO India NPSP along with other partner agencies, CSOs, etc. has been instrumental in supporting Gol in providing continued support for RI sessions and community monitoring in 20 states, including the polio priority states of Bihar, Jharkhand, Uttar Pradesh and West Bengal. The robust polio network (including more than 300 WHO medical officers and 964 field monitors, and 800 social mobilization coordinators involved in three states - UP, Bihar and West Bengal) have been engaged in ensuring meticulous planning of immunization sessions, monitoring session sites and verifying the vaccination status of children through house-to-house approach. In addition, it supported the accountability framework through STFI and DTFI to catalyse the use of data for action in states and districts with low immunization coverage.

The WHO India NPSP network has been monitoring the tagging of high-risk and most marginalized settlements identified by the polio programme with RI micro plans. The percentage of high-risk areas included in micro plans increased from 32% in 2013 to 97% in 2016 (**Figure 8**). The micro-plans for RI are being continually revised with support from WHO polio network to ensure completeness of RI service delivery. Based on WHO NPSP monitoring data, 98% of the identified HRAs have been tagged to RI session sites in these 8 Gavi states and 95% of the monitored HRAs were receiving RI services.

Figure 8: GAVI HSS1-supported inclusion of high risk areas in RI microplans



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Based on the concurrent RI monitoring data collated through the extensive WHO NPSP network in 8 Gavi states (accounting for approximately 85% of India's total population), these interventions led to a marked increase in FIC from 64.1% in 2013 to 78.7% in 2016. This marked increase in coverage was clearly visible in high risk states of Bihar (from 65% in 2013 to 84% in 2016) and Uttar Pradesh (from 61% in 2013 to 74% in 2016). Concurrent monitoring data from the field is fed back to the block, district and state task forces for immediate corrective action and to guide programmatic decision-making and actions following the campaigns.

A number of new vaccines have been introduced in the national immunization schedule. WHO NPSP network has provided technical support to the state and local governments in preparedness assessment, capacity building and monitoring of introduction activities, leading to strengthened immunization systems for better coverage and positive impact of the new vaccines in the country.

WHO NPSP monitoring network also continues to monitor the training quality of government officials and medical officers on revised training materials and info-kits on RI, as well as frontline health workers' trainings on interpersonal communication in coordination with UNICEF.

WHO support to MI included risk analysis and subsequent scoring and prioritization of districts; strengthening accountability framework through task forces; meticulous programme planning at multiple levels with focus on 400,000 high-risk settlements identified by the polio eradication programme; development of guidelines and training materials; capacity-building of government staff and frontline health workers. The polio field network (2000 monitors) led the concurrent monitoring of special immunization campaigns (MI) and routine sessions to plug gaps in implementation and generate real time data on quality of campaigns.

In addition, WHO India continues to support the state governments who were sanctioned immunization field volunteers (IFVs) under NHM for engagement and training of these IFVs to intensively monitor RI sessions in high priority districts.

In concurrence with MoHFW, WHO NPSP along with other partner agencies recently revised the existing RI monitoring tools as per the current programme needs. MoHFW, GOI in collaboration with WHO India NPSP has taken an impressive initiative in emphasizing the importance of RI monitoring and its utilization through development of RI Monitoring Guidelines and Standard Operating Procedures. These guidelines are in sync with the country's continuously evolving immunization programme and lessons learnt from polio programme to capture processes involving newer initiatives, such as new vaccine introductions and MI for improving immunization coverage and addressing inequities.

As part of India's efforts to digitalize RI monitoring tool used at health facility level to facilitate real-time RI monitoring data capture and analysis, WHO NPSP has made significant progress in developing an ANDROID mobile-based software application (RIM-MApp). The tool will be used by programme managers to fast track RI real-time data collection, analyses and strategic technical feedback of RI monitoring. Capacity of state- and district-level stakeholders will be built to ensure appropriate utilization of the mobile application to generate accurate and real-time monitoring data for RI.

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The data collection module of the software has been piloted in Delhi and Gurgaon (Haryana) and is planned for Bihar and Uttar Pradesh. User inputs from the pilot are being incorporated in the software along with further development on other modules of the software. The overall development of software is scheduled to be completed by November 2017. This initiative is funded with other sources and will increase the effectiveness of the Gavi-supported HSS intervention.

Description of activity

A concurrent monitoring of RI programme at state, district, block, cold chain, session sites and community (house-to-house) levels through field monitors will continue, with plans to strengthen and expand the monitoring network in NE states. WHO India-NPSP through its robust monitoring system built on the strong network of public health professionals (WHO surveillance medical officers) and independent monitors will continue to provide support for intensive monitoring of RI services to identify gaps in the preparedness and implementation of the RI programme, and share monitoring feedback with government at all levels so that programmatic actions could be taken based on real-time evidences generated through this system.

With Gol's renewed commitment to address strengthening of immunization programme coverage and equity in the country over the coming years, the immunization activities would greatly increase through interventions like MI set to enter its fourth phase. Under this fourth phase, the plans have already been drawn to initially cover 67 districts across the eight NE states, some of the most remote and inaccessible districts in the country. This initiative is synergistic to Gavi HSS's grant and also presents a major opportunity to improve coverage and equity in India. In concurrence with MoHFW, WHO NPSP, along with other partners, held a series of consultations to analyze concurrent and reported coverage data from WHO/ITSU, communication monitoring data from UNICEF and cold chain monitoring data from UNICEF & UNDP for risk prioritization and identification of districts for this next phase of MI.

In run up to planning for implementation of MI in NE region from February 2017 onwards, WHO NPSP in collaboration with MoHFW and support from other partners organized the NE EPI officers' review meeting in Guwahati to build consensus on the strategy for MI and district identification in NE states, understand state-specific challenges and support required in strengthening RI in NE states, as well as improve coordination between states, central government and stakeholders.

With planning initiated for the fourth and subsequent phases of MI and multiple vaccine introductions such as pneumococcal and measles-rubella vaccines in the near future, WHO NPSP is committed to support MoHFW through preparedness assessment, capacity building and monitoring of activities. Against this backdrop, the monitoring needs of the programme will increase considerably in the coming years to sustain overall improvements of the UIP and continue to generate accurate, real-time data for programmatic actions. WHO supported preparedness assessment, planning and monitoring of MR campaign through deployment of nearly 25 additional surveillance medical officers (SMOs) in five states.

With the significant level of RI strengthening activities and new vaccine introductions planned over the coming years, WHO NPSP will require the continued services of independent monitors to conduct regular monitoring of the immunization activities in the field for a long

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term. Field monitors are expected to devote 60% of their time to RI activities. However, with the entry of the country into the transition phase, there will be a considerable reduction in the number of independent monitors that will significantly impact the quality of monitoring. The transition path supports the equity agenda, continuing to utilize the infrastructure and capacity of NPSP to address health priorities in underserved and high risk areas.

The projected budget for this activity includes the 60% cost of field monitors (factoring in 15% annual reduction in strength of field monitors in view of WHO NPSP transitioning plan and annual inflation of 5%). In addition, there is a plan to increase the monitoring size starting from the existing 35%, followed by a 10% annual increase in subsequent years. This will accommodate the decline in monitoring size due to reduction in number of field monitors as per transition planning. The key indicators for measuring the impact of the proposed activity will be decided in consultation with key stakeholders and partners (such as UNICEF, UNDP, CSO [technical], JSI, etc.) under the leadership of MoHFW.

WHO NPSP will liaise with UNICEF, UNDP and JSI and initiate discussions on using its existing concurrent monitoring mechanisms and field network to monitor implementation of activities proposed under ANMOL, RISE and cold chain improvement activities as appropriate, to optimise the use of the network.

Sustainability considerations

The sustainability of this activity is part of a broader, concerted effort on polio transition planning. The RI programme will require the services of independent monitors to conduct regular monitoring in the field and generate data for programmatic actions. WHO as the part of transition plan will reduce the strength of field monitors at 15% annually from year 2018. As per timelines mentioned and lessons learnt, the MoHFW is expected to provide funding support and institutionalize this monitoring mechanism through immunization field volunteers (IFVs) beyond 2021 for steering the programme. This is expected to be supported through inclusion in the state PIPs, with currently 7 states already providing the required support.

During HSS2, it is proposed to reduce the total number of SMOs as per the transition plan, meanwhile increasing their time allocation towards RI activities from current 25% to 50% by 2021 (this time will be split between surveillance, monitoring and capacity building). The cost is expected to be shared by Gol and other sources.

Beyond 2021, WHO India NPSP will only provide technical assistance in building capacity of government officials for monitoring of UIP activities. Monitors will focus on activities related to monitoring of RI, measles rubella campaigns and surveillance, etc. WHO will continue to provide technical supervision and guidance for these monitors.

Activity 1.2: Capacity building at national, state and district levels for expansion of VPD surveillance (WHO)

The burden of diseases preventable by the vaccines is the most significant factor for making a decision on introducing relevant vaccines in the UIP. Therefore, the Gol's cMYP underpins the need for a robust surveillance system to detect cases and deaths due to vaccine-preventable diseases (VPDs) to generate evidence to inform the decision on introducing the vaccine as well as to measure its impact on the disease after its introduction. Completeness

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and quality of VPD surveillance data is also necessary to observe the trends in disease incidence and geographical spread to help plan to strengthen the immunization programme. Reporting of VPDs has been an integral part of UIP reporting system.

The quality surveillance data for vaccine preventable diseases (VPDs) that is currently available in India is limited. Inadequate surveillance data quality and reporting rates result in poor surveillance of VPDs. While some attention has been paid to strengthening VPD surveillance, systemic deficiencies and bottlenecks such as insufficient laboratory capacity and limited trained manpower at the district levels to carry out surveillance, continue to exist. Inadequate VPDs reporting results in the inability of UIP to measure disease burden to make a decision on the introduction of new antigens and impact of vaccination on the disease. There is a felt need for HR capacity building in VPD surveillance, strengthening laboratory capacity by improving infrastructure, and building system for timely reporting and actions.

Surveillance of VPDs together with poliomyelitis and measles will not only provide important information on the status of control of these diseases, but also on the overall performance of the immunization programme and identify clusters of susceptible individuals to guide vaccination strategies.

Linkages to HSS 1

Using the platform of polio and measles surveillance systems, WHO NPSP in concurrence with the Gol designed a laboratory supported surveillance for additional vaccine-preventable diseases such as diphtheria, pertussis and neonatal tetanus. As part of HSS1 implementation, the following initiatives were taken for expansion of measles and polio surveillance platform to other VPDs (diphtheria, pertussis and neonatal tetanus) during 2014-16.

- A VPD laboratory network, comprising seven laboratories across the country with Christian Medical College (CMC), Vellore as the reference laboratory, has been established by providing support for system strengthening, capacity building and logistics.
- Hands-on trainings of personnel from these laboratories in diagnosis of diphtheria and pertussis were conducted with support from Public Health England and CDC Atlanta, respectively. Conducting these trainings have helped the VPD laboratory network to implement systems for standardized laboratory testing, quality assurance management and establish linkages for reference testing, reporting and monitoring.
- To facilitate the launch of VPD surveillance, WHO India NPSP developed a field guide on surveillance for VPDs. Training material for state- and district-level trainers were also developed.
- VPD surveillance has already been initiated in Bihar, Haryana, Kerala and Uttar Pradesh by conducting state-level launch workshops followed by cascaded trainings at district and block level.
- Convergence with IDSP and ICMR lab networks has been initiated

The trainings conducted on operational guidelines for effective implementation of VPD surveillance in states where these have been initiated, have resulted in increased awareness among health care providers of both public and private sectors. As a result, quality surveillance data on diphtheria, pertussis and neonatal tetanus has started flowing in from these states.

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The data has helped district and state to take targeted actions both in terms of case management and public health intervention in response to case identification. As the AFP surveillance reporting network is wide spread across urban and rural areas, private and public sector, hence utilising the same platform has benefit of equity in built in the current strategy of VPD surveillance. The programme is also heavily reliant on surveillance medical officers of WHO-India. The data being captured is representative of only a few states that have initiated the surveillance system.

In addition, WHO NPSP in collaboration with MoHFW conducted detailed VPD surveillance cum UIP reviews in Haryana and Kerala. Lessons learnt will contribute to the roll out of VPD surveillance in other states.

Description of activity

State-wide expansion of VPD surveillance through capacity building at various levels: WHO-India (NPSP) has already field tested the operational guidelines and reporting mechanisms in four states. A network of VPD laboratories already exists in the country with technical support from WHO-India (NPSP). Support would be provided to other states in the form of capacity building for establishing a VPD surveillance system. The capacity building activity for VPD surveillance will be undertaken in 3 states each year during 2017-21 based on VPD risk prioritization and availability of laboratory support. Regular sensitization through national review meetings as well as state workshops with active participation from partner agencies, Integrated Disease Surveillance Project (IDSP) officials, CSO (technical), etc. will be continued over the period of 2017-2021.

Laboratory support would be provided through the existing VPD laboratory network, support in data management, analysis and feedback. WHO-India (NPSP) can also provide support in monitoring the surveillance system for sensitivity and quality. In lieu of transitioning, it is proposed to reduce the total number of SMOs as per the transition plan. Full-term equivalent SMO HR cost has been added in the budget for monitoring VPD surveillance activities.

Simultaneously, WHO NPSP will continue building the capacity of IDSP-based surveillance system to improve coordination and information sharing with IDSP to generate robust, actionable data for the GoI, state governments and other local bodies that will guide more evidence-based policies and programme interventions in the immunization programme future.

In order to strengthen and improve coordination between Health information systems (HMIS) and disease surveillance systems such as IDSP and NPSP to gather information on VPDs, negotiations are already underway to finalize technical guidelines.

Sustainability considerations

For a VPD surveillance system to be successful across the country and still be cost effective its design should consider sustainability without compromising on quality of data this would be sustainable by capacity building of state and local health and IDSP officials, leading to ownership by state government for establishment of VPD surveillance and by providing initial support to laboratory based sentinel sites for 4 years and then finally exploring the possibility of transitioning the ownership to GoI or respective state governments.

The GoI is already supporting laboratory cost for VPD surveillance (USD 3 million per year). Of the four states where VPD surveillance has already been launched, the Govt. of Kerala is bearing the entire operational costs for VPD surveillance activities. From 2017 onwards, in states where VPD surveillance is being expanded, operational costs for VPD surveillance activities (sample collection, transportation, etc.) will be borne by state governments. Beyond 2021, the total operational costs of VPD surveillance activities in all states is expected to be a part of state NHM PIP. WHO will continue to provide technical assistance.

GoI and states would shoulder the responsibility of establishing VPD surveillance under this approach in terms of providing necessary infrastructure, human resources and funds especially in terms of specimen collection and transport to the laboratories, case management and public health interventions.

Activity 1.3: Introduction of ANM Online (ANMOL) as way to improve data collection and management to improve service delivery (UNICEF)

The Auxiliary Nurse Midwife (ANM) traditionally records details of each beneficiary in the paper-based registers. This data is then entered on a monthly basis at the block level by data entry operator into the Mother and Child Tracking System (MCTS) portal, which tracks all pregnant women and children under two years of age. This leads to delays in digitalization and subsequent availability of data, which is further compounded by a backlog and vacancies in the position of data entry operators along with errors in data entry. As a solution to this problem, GoI has initiated a pan-India scale-up of a start-up innovation initiated by UNICEF in Rajasthan, to empower ANMs to deliver quality maternal, new born and child health services equitably and also strengthen system for real-time collection of information on maternal and child health using mobile tablets. The UNICEF start-up was aligned to the national and global maternal and neonatal child health (RMNCH) guidelines and following a continuum of care approach. The GoI has successfully launched ANMOL in state of Andhra Pradesh in 2016. ANMOL is being implemented in the entire state of Andhra Pradesh using government funds and there is a plan of national level scale-up of ANMOL application.

The application, named ANMOL, a multifaceted mobile tablet based android application helps ANMs in early identification and tracking of the individual beneficiary throughout their productive lifecycle. ANMOL would help ensure tracking of beneficiary for proper health care including immunization beneficiaries. The system also facilitates timely delivery of full component of antenatal, postnatal & delivery services and tracking of children for complete immunization services. Facts for life videos are also embedded to enable the ANM to show it to the families for behavior change. Thus, this tool acts both as real-time data monitoring tool and helps capacity building of service providers and beneficiaries behavior change through in built videos. Also, this tool provides a comprehensive solution for reporting, counseling, tracking, monitoring and using data for action for RCH services at all levels. The application works both offline and online and also acts as a job aid to guide ANMs in decision making and client counselling in the field. The system has been integrated with the Indian Government's Universal ID database, the Reproductive Child Health (RCH) portal, and has the potential to integrate other innovations in future for real time monitoring and interventions.

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While an independent assessment is planned by the government, the pilot in districts of Rajasthan and state-wide experience of Andhra Pradesh has shown a lot of advantages of ANMOL use by ANMs like, seamless flow of data, time saving, less data errors and adding a smartness quotient to the ANM's work. The summary of experience of Andhra Pradesh in implementation of ANMOL is given in **Annexure 4**. The experiences in field have led to the release of four updated versions of the software addressing the issues encountered in the field. Bilingual (Hindi and English) enhancement of the application, with a provision to add other languages has been rolled out. Budgetary projections in HSS2 are based on experience of around two years of providing support for national- and state-level trainings, implementation and cost of the tablets already being used.

Sustainability considerations

ANMOL is in line with the government's 'Digital India' initiative, and therefore has strong political and administrative commitment. All ANMs (around 12,000) in the state of Andhra Pradesh and selected ANMs in Rajasthan are already using ANMOL and reporting data on it. Many states have made requests for implementation but a conscious decision for phase-wise implementation was taken by MoHFW as a result of which select districts of Madhya Pradesh and Telangana have been selected for next phase of implementation through domestic funding. Process of training and roll-out in selected districts of the two states has started.

The support requested through Gavi HSS 2 will be utilized towards technical support for three years to the MoHFW, procurement of around 34,000 tablets (15% of total requirement), support to national-level trainings and master trainers for states. More than 200,000 tablets and the trainings at all levels at the states, districts and beyond shall be done with domestic funds for which the government has already given an in principle agreement. Therefore there is a strong component of programmatic and financial commitment from the government.

Activity 1.4: Monitoring and Evaluation are planned to provide data for improved decision making (UNICEF)

Linkages with Gavi HSS 1

INCHIS was designed to primarily assess the impact of RI/MI on immunization coverage and shed light on other relevant health indicators for better programming in RMNCH+A. UNDP conducted three rounds of INCHIS under HSS 1. The GoI has decided to undertake Coverage Evaluation Survey (CES) with UNICEF support under HSS 2; to obtain robust immunization specific data.

Description of activity

A good source of data is required to make well-formed policy decisions. Most of the surveys in country like NFHS, DLHS and AHS collect information about various health related indicators including immunization. These surveys provide information related to immunization coverage indicators but do not focus on other critical immunization indicators like booster doses, birth doses, drop-out rates, co-relation between immunization coverage and other socio-economic indicators and education status of mothers. Most of the surveys provide information on place of vaccination (public or private health facility) but CES also captures

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additional information on location from where immunization services were availed i.e. outreach vaccination site, sub-center and other vaccination sites in villages thus supporting the programme in making strategic policy decision to improve access and coverage. CES also provides information on the time taken by beneficiary to reach the vaccination site, thus giving an insight to the micro-plan.

It has been observed that main reasons for low immunization coverage is the lack of awareness among parents about the immunization and fear of side-effects of vaccination. At present, CES is the only survey which gives data about the demand issues and reasons for non-immunization in the community. This data is important as it helps in evaluating the impact of the IEC & BCC activities on immunization coverage. CES also collects information about safe injection practices (use of AD syringe for vaccination).

From the above given information, it can be concluded that at present, CES is the only survey which is focused on immunization. Along with immunization data, CES also provides information on maternal health indicators and other child health indicators. Thus it can be said that CES is a complete survey giving information about maternal and child health indicators. CES is being proposed as one of the activity under Gavi HSS 2 but would require additional funding beyond the allocated funds under HSS-II. UNICEF will seek alternate funding sources to bridge the funding gap and conduct a robust evaluation of Immunization coverages and associated parameters. This will be a one-time activity and will be conducted at an appropriate time period during Gavi HSS II that will support the immunization programme.

Activity 1.5: Research interventions (UNDP)

Sub-activity 1: To establish an effective platform for various stakeholders to work together in the area of research on vaccines and immunization.

Linkages to HSS1: In order to create an active platform for continued and productive engagement between the UIP and the research community and help strengthen the evidence-base for improved policy making and practice of vaccine delivery and immunization, a 'Vaccines and Immunization Research Network' was created under the Gavi-HSS 1. The scope of the network spans all areas of immunization programme including but not limited to innovations in vaccine delivery, new vaccines and improvement of existing vaccines, operational and translational research for successful implementation of UIP.

Four research and surveillance proposals were funded under HSS1 and are listed below:

- a) Pneumonia Surveillance
- b) Congenital Rubella Syndrome (CRS) surveillance
- c) Establishment of a multi-centric active AEFI surveillance network in India
- d) Qualitative study on barriers and facilitators for AEFI reporting in India.

In addition to the research projects, research seminar on immunization will be held during the extension period.

Description of activity: In Gavi-HSS2, it is proposed that the network (VIRN) be continued to support:

- i. Pneumonia Surveillance: Continuation of the ongoing project under HSS phase 1. The aim of the project is to establish and sustain a network for sentinel surveillance for Pneumonia

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caused by *S. pneumoniae* and also for invasive bacterial diseases caused not only by *S. pneumoniae* but also by *Haemophilus influenzae* type B and *N. meningitidis* in India. Gol considers to introduce PCV as part of the recently phased introduction of a pentavalent vaccine (DPT-Hep.B-Hib) in selected states of the country as part of UIP. An ongoing surveillance network is critical to facilitate data flow and monitor the changing trends in distribution and replacement of serotypes of *S. pneumoniae* and other invasive bacterial diseases (such as *H. influenzae type B* and *Neisseria meningitides*) of these potentially lifesaving public health interventions.

- ii. CRS Surveillance: Continuation of the ongoing project under HSS 1. Gol decided in 2016 to introduce rubella vaccine in the national immunization programme. In view of the proposed introduction of rubella vaccine in the country, it is proposed to establish surveillance for CRS, which will provide a baseline estimate of disease burden and help monitor the impact and progress made by rubella vaccination. In the first year, surveillance will be established in six sentinel sites following the WHO guidelines outlined in the *Strategic Plan for Measles Elimination and Rubella and Congenital Rubella Syndrome Control in the South-East Asia Region*. In the second year, 14 new sites will be inducted, making it a total of 20 sites.

Activity 1.6: Gavi Secretariat - Project Management Cell (PMC)

The Project Management Cell (PMC) was set as part of HSS1 and will continue as part of HSS2 in providing coordination, oversight, and support functions of the HSS2 grant for the implementing partners. The PMC will coordinate and facilitate the review and monitoring process, and collect the reports from partners/states and other stakeholders, compile and analyse the reports, and present them to the IAG/ MoHFW for action.

The PMC will also be the interface between the partners and MoHFW for the day-to-day implementation of HSS2 along with GAVI secretariat in Geneva.

A mid-term and review is also planned for HSS2.

Activity 1.7: HR support at national level (WHO)

In HSS1, Gavi supported 25-30% remuneration cost of WHO staff to support RI activities. This is an ongoing support comprising 25% remuneration cost in 2017-2018 and 30% in 2019-2021 for 4 national staff (2 technical officers and 2 technical assistants) based on dedicated time for RI. The staff is engaged in providing oversight, development of technical material, and coordination with MOHFW and other developmental partners at national level.

Sustainability considerations

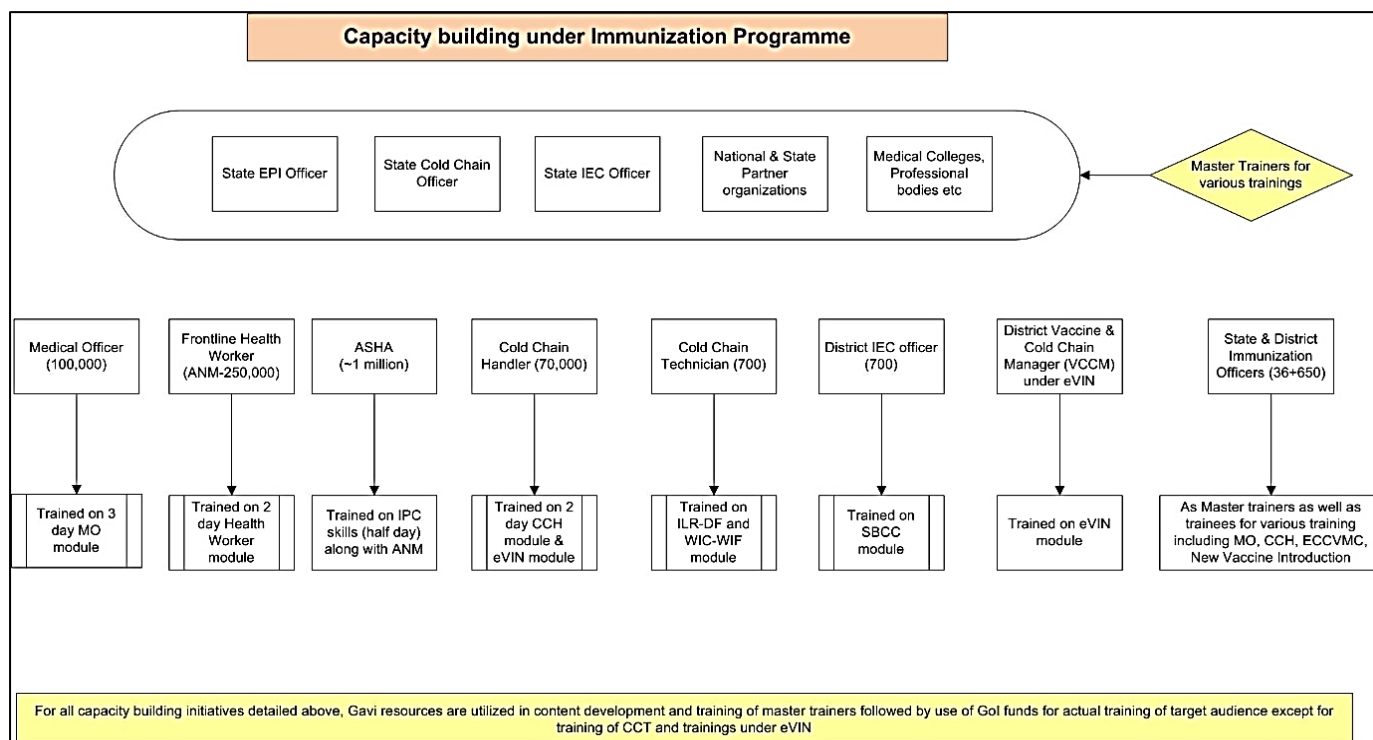
Sustainability for national-level HR: The sustenance of national-level HR will be part of the WHO-NPSP transition plan being developed.

Objective 2: To improve capacity of human resources for service delivery and programme management for equitable and efficient immunization services

Continuous training and skill building of health staff involved in routine immunization program is required to achieve and sustain quality and coverage of immunization. The Government of India's comprehensive Multi-Year Strategic Plan (cMYP) for immunization underlines the need for strengthening the existing training infrastructure and also starting new facilities. The issues of shortage of health staff and their training needs can be addressed by institutionalizing an effective and robust training mechanism to provide equitable, efficient and safe immunization services to all children and pregnant women. Although the GoI has put in place a training infrastructure aligned with annual PIP to encourage all states to develop a time-bound schedule for training for all staffs and refresher trainings at regular intervals, a number of issues have been identified in implementation of training that varies from state to state resulting in gaps in performance.

The National Institute of Health and Family Welfare (NIHFW) is the national nodal agency for training activities including immunization. The NIHFW, in coordination with Immunization and Training Divisions within MoHFW, reviews the training plans from all states; conducts Training of Trainers (ToTs) courses, as well as monitor and evaluate the quality of trainings. The State Institute of Health and Family Welfare (SIHFW) is nodal agency at state level to plan, implement, monitor and evaluate the immunization training activities. A schematic diagram indicating the capacity building programme under UIP and linkage with HSS 2 is given in **Figure 9** and further elaborated in **Annexure 2**.

Figure 9: Capacity Building under Immunization programme



Activity 2.1: Capacity building of master trainers for microplanning and RI strengthening (WHO)

Previous national-level performance assessments undertaken to assess the quality of last phase of training activities revealed gaps in the availability of trained master trainers for undertaking trainings at all levels, which resulted in delayed start of trainings in quite a number of states and took a lot of time to complete one full cycle of medical officers and health workers' trainings. The recommendations of these evaluations were utilized to improve the quality of immunization trainings for health cadres in the states and districts conducted as per NHM norms. One of the major recommendations of these performance assessments was to conduct state training-of-trainers (ToTs) to increase the pool of master trainers at the state and in all regional training centres in order to fast track the trainings.

Sub-Activity 2.1.1: Training of trainers on Medical Officers Immunization Handbook:

Under the leadership of MoHFW, WHO India NPSP, in collaboration with other development partners including UNICEF, UNDP, JSI, CSOs (technical), proposes to adopt the strategic approach of undertaking ToTs on the revised MO immunization handbook to fast track and ensure uniform quality of state- and district-level trainings to be conducted as per NHM norms (PIP Part C). This will lead to successful completion of one full cycle of these trainings in a reasonable time.

Linkages with HSS I

Gavi HSS1 funds were used to develop the revised medical officers' handbook 2016 edition, related training materials and info-kits for capacity building of government medical officers on RI. The development of the revised 2016 edition MO immunization handbook training package was undertaken by MoHFW in collaboration with partners such as WHO, UNICEF, etc. through activities such as focused group discussions, consultative meetings, field testing of the training materials, and printing and dissemination of the training package across the country.

Description of activities: The following activities will be undertaken under Gavi HSS 2:

1. Technical training workshop at the national level for building a pool of master trainers. Regional TOTs will then be carried out. Following these TOTs, the master trainers will then conduct state/district level trainings as per budget provided under NHM. State TOTs will be supported for the total 12 select high priority states (includes 8 Gavi HSS1 states, select 2 NE states and two low performing states).
2. Revision of the existing MO immunization handbook (2018-19), its accompanying facilitator guide and training kit. The 2016-17 edition of MO Immunization Handbook will be revised in 2018-19 in consultation with MoHFW and key development partners to incorporate the new RI landscape. The revised training package will be developed in consultation with all stakeholders through activities such as focused group discussions, consultative meetings, field testing of the training materials, printing and dissemination of the training package.

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3. Joint performance assessment of medical officers' trainings will be conducted in 2019 in collaboration with MoHFW and other partners to evaluate the quality of trainings.

Sub-Activity 2.1.2: Training of trainers on Health Workers Immunization Handbook:

Under the leadership of MoHFW, WHO India NPSP, in collaboration with other development partners including UNICEF, UNDP, JSI, CSOs (technical), proposes to adopt the strategic approach of undertaking ToTs on the revised health workers immunization handbook to fast track and ensure uniform quality of district-level trainings to be conducted as per NHM norms.

This will lead to successful completion of one full cycle of these trainings in a reasonable time.

Linkages with HSS1

In HSS 1, health workers immunization handbook (2016-17) was revised and related training materials for capacity building of health workers on RI was developed. WHO India NPSP provided technical and financial support for conducting frontline workers' training and tracking of these trainings at state and district level. Through the Gavi HSS 1 funds, one round of frontline workers (health workers and social mobilizers as ASHA, AWW) trainings have been completed in 8 Gavi HSS 1 states; 90% health workers, 85% ASHAs and 80% anganwadi workers have been trained so far.

Description of activities: The following activities will be undertaken:

1. District ToTs for block-level trainers is planned to be conducted from 2017-18 in 8 Gavi HSS1 states, select 2 NE states and two low performing states. No financial support is required for conducting separate state ToTs for health workers module. During the ToTs for MO immunization handbook, the trainers will be oriented on the methodology and training practices of the health workers RI training.
2. Revision of the existing health workers immunization handbook training package, its accompanying facilitator guide and training kit will be carried out in 2020. The 2016-17 edition of Health Workers Immunization Handbook will be revised in 2020 through stakeholder consultation. The revised training package will be developed in consultation with all stakeholders through activities such as focused group discussions, consultative meetings, field testing of the training materials, printing and dissemination of the training package and translation support (as needed by the state).
3. Joint performance assessment of health workers trainings in RI will be conducted in 2020 to evaluate the quality of trainings.

Sub-Activity 2.1.3: Training of trainers for RI microplanning strengthening:

The GoI, has taken several important initiatives as part of coverage improvement plan with focus on addressing the inequity. One such major initiative is strengthening of micro-planning process using the polio learnings. The success of polio eradication programme has highlighted the significance of intensive micro-planning. It enables effective identification and mobilization of beneficiaries through bottom-up planning, thereby resulting in improved immunization coverage in India.

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Linkages with HSS 1

Using the Gavi HSS1 funds, a unique module on microplanning for RI using polio learnings has been developed through a consultative process with all stakeholders. This exercise based package familiarize participants with steps and tools of conducting headcount survey, session logistics planning, tracking of beneficiaries and communication planning for RI . The package has been developed for use at four levels - state, district, primary health centre and sub-centre. The package was successfully rolled out in two Gavi HSS 1 states (Uttar Pradesh and Bihar) and seven additional states (Andhra Pradesh, Himachal Pradesh, Karnataka, Kerala, Puducherry, Tamil Nadu, Telangana and Uttarakhand). This resulted in improved head-count based RI microplanning.

These microplanning workshops for RI have been critical in building the capacities of all health staff cadres in preparing robust and complete micro plans for RI and strengthen overall health service delivery mechanism across the country.

Description of activities: The following activities will be undertaken:

1. Conduct RI exercise-based microplanning workshops in the remaining 6 Gavi, select NE and 2 other states depending on need. The activities include state level microplanning ToTs in 12 states over the period of 2017-2019.
The state ensures that following the state workshops, one-day district workshops are conducted in all the districts in a specified time frame so that the package could well be taken forward to a half to one-day package at block and planning units for training the ANMs and ASHAs. These trained medical officers will conduct half day training using the block packages for all ANMs in their blocks. Medical officers with support from ANMs will conduct in batches half day training for ASHA workers using simple exercises on conducting head counting and mobilization.
2. Revision of RI microplanning package in 2020 and followed by state ToT in 2020-21: Revision of RI microplanning package planned for 2020 will develop computerized, comprehensive RI micro-plans at the health facility level. This will facilitate in improved availability of vaccines (and other logistics) and improvement in immunization coverage over a period of time.
3. Evaluation including documenting lessons learnt utilizing the experience on RI microplanning in 2-3 states that have already conducted these workshops will be done.

Sustainability considerations (for all TOTs):

Capacity building trainings for medical officers and health workers:

WHO India proposes to initiate discussions with JSI for integration of the training packages that will be developed as part of above-mentioned trainings as part of its RISE package.

- Beyond 2021, these trainings are proposed to be institutionalized under the annual training plan of NIHF, which subsequently will be implemented by SIHF at the state level. GoI is expected to support these ToTs and other above-mentioned activities through

NHM/other identified source. WHO India will continue to provide technical support for ToTs.

For the next evaluation of MO Immunization Handbook trainings beyond 2021, MoHFW is expected to undertake this activity with NIHF. WHO India will provide technical support for this activity.

- The printing and dissemination cost of revised 2019 edition MO Immunization Handbook package and 2020 edition of health workers immunization handbook is expected to be undertaken by the Govt. of India as per budget approved under the NHM PIP.

Microplanning strengthening trainings:

- Funds are currently available under NHM PIP for strengthening RI micro-plans through meetings/reviews. WHO India NPSP in collaboration with key partners will support state TOTs. Thereafter, the state should ensure that following the state workshops, one-day district workshops need to be conducted in all districts in a specified time frame so that the package could well be taken forward to a half to one-day package at block and planning units for training the ANMs and ASHAs. The trainings in the districts and blocks will be conducted as per NHM norms.
- Beyond 2021, WHO India NPSP will only provide technical assistance for updating the RI microplanning tool. Any microplanning trainings and evaluation in identified states beyond 2021 is expected to be institutionalized under the annual training plan of NIHF, which subsequently will be implemented by SIHF at the state level and financially supported by MoHFW through NHM PIP.

Activity 2.2: Rapid Immunization Skill Enhancement (RISE) – a continuous knowledge building system strengthening approach in India (JSI)

The RISE package will be developed with a capacity-building framework in mind to cater to different levels of health personnel vis-a-vis programme managers, medical officers, health workers and mobilisers. The key feature of this framework is an integrated approach, which allows each level to complement each other as well as generate actions for the others.

Furthermore to ensure consistency of messaging the RISE package will be developed in consultation with the existing partners under the stewardship of MoHFW. The current and past training packages developed by various partner agencies for MoHFW will be incorporated into the RISE package. The implementation of this package will not be a standalone activity, but the RISE package will be made part of all the trainings as a refresher package at the end of the trainings. From there on the RISE package will be handed over to various stakeholders for whom it will be developed, for future references, refreshing the knowledge of previous trainings, as a mechanism of flow of new policies, guidelines and initiatives and as a tool of self-learning, peer to peer learning and on job training.

Moreover the infrastructure (server etc.) required for e-package and m-package under RISE will be stationed at NIHF the apex training institute of the country. The content of the packages will also be developed in consultation with NIHF and relevant trainers will be trained to implement the RISE package. This will allow sustainability of RISE beyond Gavi

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HSS2 and NIHFW being the apex institute for all health related trainings, this will allow integration of RISE with all future RCH related trainings in the country.

The following activities will be undertaken:

Sub-Activity 1: Developing a framework for implementation of training activity (within first year)

This will include establishing a RISE cell in five districts. This cell will consist of programme managers responsible for implementation of immunization programme and related trainings, including one Training Officer and Training Coordinator to provide technical and administrative support for strengthening the trainings under RI system. A training needs assessment of different cadres of workers involved in implementation of UIP will be conducted followed by a national-level consultation with MOHFW. The principles of adult learning will be used to develop a package of innovative methodologies and customize them to the needs of specific target audiences (i.e., programme managers, supervisors, health workers, mobilizers) while taking into consideration the geographical surrounding and operational feasibility. The package will integrate self-learning methodologies, peer-to-peer support, classroom, on-site supervision support based techniques, and e- and m-learning platforms.

Sub-Activity 2: Implementation of the RISE package in the 5 selected States/Districts (12 months, year 2): This will be done following district and block level training workshops to apprise providers and mobilisers about the RISE package.

Sub-Activity 3: Conduct Impact assessment of the Pilot (6 months): Team will document learning in terms of its ability to fulfil the learning goals and objectives identified during the needs assessment exercise. This will be followed by sharing of the impact of the RISE package with MOHFW and partners and develop plan for expansion.

Sustainability considerations:

JSI, under the guidance of MoHFW will work in close coordination with NIHFW, an autonomous organization, under MoHFW, Gol and acts as an 'apex technical institute' for training. The concerned officials and managers at NIHFW will be involved in the development of the training package to ensure that the package is inclusive of the needs of NIHFW and can easily integrate with and complement with the existing system. The platforms required for developing and maintaining the e-learning and m-learning parts of the package will be hosted via the NIHFW server. Technical expertise will be sought from NIHFW for conducting the pilots as well as to study the impact of the same. JSI, along with NIHFW will also develop implementation plans for a selected number of districts across the country and based on these learning, an expansion plan for the rest of the country will follow under the leadership of NIHFW and MoHFW.

Activity 2.3: Development of a tribal strategy for Immunization programme (UNICEF)

A separate Tribal Development Planning Cell has been functioning under MoHFW, Directorate General of Health Services since 1981 to co-ordinate the policy, planning, monitoring, evaluation, etc. of the Health Care Schemes for welfare and development of Scheduled Tribes (STs) and Scheduled Castes (SCs). In October 1999, the Ministry of Tribal Affairs (MoTA) was constituted to provide more focused attention on the integrated socioeconomic development of the most underprivileged sections of the Indian society namely the STs, in a coordinated and planned manner. A statutory National Commission for Scheduled Tribes (NCST) came into being consequent upon passing of the Constitution (65th Amendment) Act, 1990. The NCST is vested with the duty to participate and advise in the planning process of socio-economic development of STs, and to evaluate the progress of their development under the Central and State governments.

Though different ministries and departments have been working together to improve the health conditions of the tribal population. However, the health indicators of the tribal population are still not at par with the indicators of the general population. One of the reasons cited for tardy improvement in health status of the tribal population is poor and incomplete understanding about their health problems, both general and specific to certain tribes. Available data from surveys indicate differentials in reach of public health programmes to the tribal population. The GoI is implementing special health and developmental schemes for tribal population such as Navsanjivani scheme, Matrutva Anudan Yojana, Pada Volunteer Scheme, Mobile Medical Squad, Compensation for loss of daily wages, Water Quality Monitoring. The Indian Council of Medical Research (ICMR), through its network of disease oriented National Institutes and Regional Medical Research Centres (RMRCs) is also conducting research on health problems of tribal population. The GOI and partner organizations such as USAID have been working jointly to improve the health and well-being of the tribal population. USAID has mainly worked in the water, sanitation and hygiene area and maternal health. However, the focus of the health programmes have mainly been on curative health care. In addition, there is inadequate understanding about the need and demand of immunization services in the tribal population.

The reach of immunization programme to tribal population has been lower as compared to all other population groups, i.e. general, Other Backward Communities (OBC) and Scheduled Castes (SC) population. CES 2009 as well as RSOC 2013 indicate that there is a ~10% gap in FIC in STs compared to the national average, and this has been consistent for the past 6 years even with all the efforts initiated by MoHFW to increase FIC.

Full Immunization Coverage among different Social Groups					
Survey	National Average	ST	SC	OBC	Other Caste
CES 2009	61%	49.8%	58.9%	60.6%	78.1%
RSOC 2013-14	65.3%	55.7%	61.6%	65.4%	71.6%

Full Immunization Coverage among different Wealth Quintiles (WQ)		
Survey	Highest WQ	Lowest WQ
CES 2009	75.5%	47.3%
RSOC 2013-14	80%	50.6%

The data above indicate that a special strategy will be required to bridge the immunization gap among ST population and will help in addressing caste and class-based inequalities. Efforts were made by GOI to reach out to all left out children via MI. However, a different strategy is required for the tribal population as there are both issues of demand and supply. There is global guideline to reach every community (REC) that will be adapted to meet country-specific requirements. Meetings will be held with partners and stakeholders from various ministries to develop a strategy for tribal areas. This strategy will be field-tested. The learnings from field implementation will support in modifying and finalizing the strategy that can be helpful in reducing equity gaps in the tribal population.

UNICEF has been working with the tribal population in India to improve the nutritional status of children and reduce malnutrition. UNICEF proposes to develop a strategy to address the immunization gap in tribal population and field test the strategy in selected states. Proposed interventions under HSS 2 include the following:

1. Development of a tribal strategy to address immunization equity gaps
2. Field test the strategy in selected 3 or 4 states with considerable tribal population and gaps in immunization coverage

The learning from field implementation will support in modifying and finalizing the strategy that can be helpful in reaching the unreached.

Sustainability

Gavi HSS2 funds will be used only for development and pilot-testing of the special strategy for reaching out to the tribal population and government funds will be used for implementation of strategy across the country. In India, National Ministry of Tribal Affairs aims to provide more focused approach on the integrated socio-economic development of the Scheduled Tribes (STs), in a coordinated and planned manner. Hence the funds for the sustainability of this project are available with both the National Ministry of Health & Family Welfare and National Ministry of Tribal Affairs.

Activity 2.4: Enhancing RI quality and coverage, and addressing inequities in urban areas (WHO)

India's rapid urbanization, coupled with weak urban infrastructure and acute shortage of human resources, is posing a significant challenge to the country's efforts in scaling up of universal health coverage across the country. Although strategies to strengthen existing urban

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health care infrastructure are being implemented under NHM, factors such as ineffective outreach, weak referral system, and inadequate economic resources inhibit/restrict the access of urban poor to health care services. Despite several programmatic initiatives, urban-rural and gender differences in child immunization pose an intimidating challenge to India's public health agenda.

With urbanization comes migration and demographic, economic and social disparities. Despite the supposed proximity of the urban poor to urban health facilities their access to them is severely restricted. The most affected are the high-risk areas which are either pocketed within urban or peri-urban areas.

Description of activities:

WHO NPSP will leverage UNDP's experience and feedback in urban health system strengthening efforts, as well as in streamlining cold chain issues through strengthening of eVIN in the identified cities. UNICEF's social mobilization network (SMNet) will be used to mobilize communities in urban pockets with high number of vaccine acceptance and refusal issues.

The following activities will be undertaken:

1. **Identification of 10 urban cities** in consultation with MoHFW and other key stakeholders at state and sub-state levels for supporting urban immunization strengthening activities. Based on population, immunization status, evidence generated through VPD surveillance, deployment of NHM resource and available funding. It has been agreed upon that 10 cities will be identified in the states of Odisha and Uttar Pradesh. The selection criteria will be low immunization coverage in urban pockets of these 10 cities.
2. **Establishing accountability mechanisms** through state and district task forces for immunization to review preparedness and implementation quality for each of the identified urban cities.
3. **Urban risk prioritization**, area demarcation and field validation to develop micro-plans for immunization: Identification of high-risk areas with underserved populations, urban migrants, slum dwellers with coverage and equity issues will be undertaken followed by field validations for reviewing the existing RI micro-plans to ensure inclusion of these populations.
4. **Resource mapping**: Promoting effective partnership focused on inter and intra-sector coordination with stakeholders, targeted outreach services, and involvement of the community and urban local bodies.
5. **Capacity development** and trainings of health personnel at all levels for decision making; independent monitoring mechanism through deployment of polio staff and field monitors to assist with micro-planning and generate real time monitoring data at sub-district levels for immediate actions; provide monitoring feedback during task force and other review meetings; resource deployment in high focused areas.

Sustainability considerations:

In the long term, the above proposed activities will be institutionalized within the National Urban Health Mission (NUHM) activities. With the strengthening of Urban Health Mission and greater engagement of state governments, especially the urban municipal bodies with the partner agencies, it is critical to optimally utilize Urban Health Mission for strengthening RI in urban and peri-urban areas.

Objective 3: To strengthen vaccine logistics and cold chain management

The success of the immunization programme efforts against vaccine-preventable diseases is attributable in part to proper storage and handling of vaccines. Unavailability of vaccines affects coverage, while exposure of vaccines to temperatures outside the recommended ranges can affect potency adversely, thereby reducing protection from vaccine-preventable diseases. GoI has prepared NCCVLAP as a vision document to guide the programme for strengthening vaccine logistics and cold chain management. A brief write up on the NCCVLAP and how the proposed HSS 2 activities fit within the six strategic interventions in NCCVLAP is in **Annexure 5**. HSS 2 is expected to support strengthening the cold chain management capacity, vaccine availability and quality of vaccines thus improving coverage and equity.

Activity 3.1 Capacity development of cold chain and vaccine handlers, technicians and vaccine logistics managers (all states) – (UNICEF)

Linkage with Gavi HSS1

Gavi HSS1 funds supported in capacity building of critical HR, develop the cold chain handlers training module, and conducted the state and national level trainings. Till September 2016, 115% of the target (1800 staff) were trained on cold chain management, supportive supervision, MIS and EVM. A Training MIS (TMIS) was developed that tracks training schedule for all staff and helps in monitoring and planning of trainings.

Description of Activities

In HSS 2, capacity building activities will be implemented to cover over all 27,000 cold chain points in country, nearly 500 cold chain technicians, and 900 programme managers at state and district level to support current EPI and newer vaccine introduction through state and regional ToTs. It is anticipated that the modules for all ToTs will be revised/updated at a gap of 3-4 years considering the introduction of newer vaccines, newer cold chain technology and guidelines, etc. Rigorous pre-post assessment would be conducted to assess knowledge and skill retention.

The sub-activities would include:

1. Use of animated videos, modules and job aids for cold chain technician (CCT) and cold chain handler (CCH) training: A set of small video films for CCH and CCT will be made on various topics related to preventive maintenance, recording and reporting, multiple small videos on repair of specific repair of ILR/DF, etc.

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2. Refresher Training of CCT and ToT for CCH: All CCTs in the country (1 per district) will be trained on the repair, maintenance of cold chain system at NCCVMRC and NCCRC; ToT for CCH (state and regional) are planned.
3. Vaccine Management course (T-VaCC: Training for vaccine and cold chain) ECCVMC Course: This will be a basic course providing an overview of immunization programme, basics of supply chain management, cold chain system, roles and responsibilities of immunization officers in ensuring effective supply chain/cold chain etc. The target audience will be National experts on immunization supply chain, State Immunization Officers, State Cold Chain Officer and Vaccine logistics manager. GoI will conduct the training at district level.

Sustainability considerations

Gavi HSS 2 will support module development and ToTs for CCH, covering approximately 200 master trainers, while GoI provides support for training of approximately 60,000 CCH.

For CCT, HSS2 will provide accommodation cost whereas GoI organizes the venue and trainings at national institutes. All training cost will be within the RCH norms.

The majority of activities related to this intervention was funded and managed by GOI, including capacity building at State and district level GOI has already taken up most of these activities, so sustaining the remainder activities will not be a challenge. HSS2 funds are mainly to support the ToTs and for scale-up of the T-VaCC.

Activity 3.2: NCCMIS augmentation and Immunization Supply Chain-Cold Chain data harmonization – (UNICEF)

Linkage with Gavi HSS1

NCCMIS augmentation was part of HSS-1, and during this project various features were upgraded and new modules introduced focusing on better cold chain management.

Description of activities

It is envisaged under HSS2 that data from various sources will be aggregated and harmonized to provide a better understanding, correlation, and usage of data for programme purpose. This new augmented version of NCCMIS would be a handy tool for programme managers at all levels. The new version would also generate a dashboard, with eVIN data integrated and make the data sharable with various stakeholders. This would also have flexibility of accessing through newer technologies (android/windows / i-phone). Support through HSS2 would help harmonize information across various sources, provide a holistic view of the programme performance, and help identify and understand the gaps or duplication of data that may result from triangulation.

Sustainability considerations

NCCMIS is fully functional in all 36 states and UTs with the system hosted on Govt. server and fully owned by GoI. The updations and modifications are also conducted by NICS, under Ministry of IT. The data reporting, monitoring and review is fully owned and conducted by

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respective State Governments. An immunization supply chain harmonization process is being initiated to provide a holistic picture to managers and decision makers for effective supply chain-cold chain management.

Activity 3.3: Support Government in review and implementation of EVM Improvement Plans (16 large states) – (UNICEF)

Linkage with Gavi HSS1

In HSS1, EVM was carried out in for 12 states including all NE states. Improvement plans have been incorporated in the state PIPs.

Description of activities

In HSS2, EVM will be carried out in additional 4 states, while follow-up EVM is carried out in the 12 HSS1 states.

Comprehensive EVM targets for continuous improvement in immunization supply chain system through a comprehensive approach. This comprises assessors' orientation, field assessment, gap analysis, preparation of improvement plan and action plan to implement, review of implementation status followed by reassessment and repeat of the cycle.

The **sub-activities** to include are:

1. Supporting states in undertaking Effective Vaccine Management (EVM) assessment and development of Improvement Plan
2. Support states/nation in implementation of improvement plan
3. National review meetings to follow up on progress/ CCL improvements

Sustainability considerations

While HSS1 funds were used to build the capacity and field assessment, government officials were deployed for assessment, data collection, and development of improvement plan. Moreover, majority of activities envisaged under Improvement Plan were implemented using government funding. As many states have become familiar with the process of EVM, under HSS2, it is planned to use the existing pool of trainers as well as develop additional capacity in the state to make it self-reliant. GoI supports approximately 85% of cost of EVM assessment and implementation.

Activity 3.4: Strengthening of institutions, cold chain infrastructure, and equipment – (UNICEF)

Linkages with Gavi HSS1

The establishment of two national institutions i.e. NCCVMRC, New Delhi and NCCRC, Pune has been a milestone achievement and is primarily based on funds from Government of India, including allocation of land and selected HR. Gavi-HSS1 funds have provided critical support in establishing these institutes including availability of cold chain equipment, tools and limited technical HR. Now, both institutions have started gaining their foothold and demonstrated their

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capabilities in terms of providing technical support to MoHFW as well as the states in various programmatic issues. At present, these institutions have been placed in government premises and more than 50% of the staff is being covered from Gol resources. Gradually Gol, is also making its effort to cover certain activities of these centres through regular funding. However, there are still huge potential with these institutions and they need to be tapped for better programmatic outcomes. For that purpose these institutions need to be supported for technical enrichment, infrastructure building and provision of right kind of equipment and through usage of latest technology for empowering them. Gavi HSS2 would be instrumental in this endeavour. The age of these centers has been less than 3 years and it is too premature to withdraw support which might result not only in losing the gains made during the past year but will also hamper one of the most strategic system strengthening initiative initiated under HSS1.

India is one of the largest vaccine manufacturers and exporters in the world, but the presence of vast Indian refrigeration industry in immunization programme is totally missing. The entire national immunization programme is dependent on imported devices leading to issues of repair, maintenance, and spare parts. UNICEF, under the Gavi HSS1, took the first step to sensitize Indian manufacturers on the vast immunization programme, the need of cold chain equipment and to support them in addressing challenges to become part of the immunization programme. The key reasons for non-participation of Indian manufactures included unawareness about the market, no or limited knowledge of WHO PQS procedures and standards, non-availability of PQS lab in India and high cost associated with testing the equipment offshore leading to non-participation. UNICEF continues to peruse this strategic area in development of a WHO-PQS lab under Gavi-HSS2, thus supporting not only India's immunization programme and be a part of Government of India's 'Make in India' mission, but also contributing to the global public health programme..

Sub-activities:

1. Need-based emergency procurement to bridge cold chain gap
2. Workshop for capacity building of Indian Manufacturers for WHO-PQS compliant CCE
3. Strengthening of NCCRC and NCCVMRC through technical assistance by providing limited HR support
4. Strengthening of NCCRC with technical support in CCE testing Lab

Sustainability considerations

Three Indian cold chain manufacturers for the first time bid for the open international tender issued by Gol. Although, not successful, HSS2 funds are expected to further build their capacity to WHO-PQS standards enhancing the availability and reducing the cost of cold chain equipment and spare parts in India. Strengthening CCE testing lab in India will reduce the cost of testing and promote Indian manufacturers to apply for WHO-PQS standards.

Majority of the funding for NCCVMRC and NCCRC is through Gol, including infrastructure and HR. Limited support to this institution in the form of technical HR is provided under HSS. Moreover, a major portion of cost associated with technical trainings (travel cost of participants) is borne by Gol through PIP allocation.

Activity 3.5: To strengthen vaccine logistics management through electronic vaccine intelligence network (eVIN) - (UNDP)

Linkages with Gavi HSS 1

With the implementation of eVIN, across all districts in 12 States – UP, MP, Rajasthan, Assam, Manipur, Nagaland, Himachal Pradesh, Bihar, Odisha, Chattisgarh and Jharkhand, UNDP has developed a platform of trained HR at district, regional and state level; a robust software technology and hardware for vaccine logistics and temperature monitoring that can be easily scaled up in all the remaining states of the country. A full roll-out of eVIN across all cold chain points and vaccine stores will provide real time visibility of all vaccine stocks along with their actual storage temperatures that can be viewed as dashboards by programme managers at district, state and national levels. This system will also help build in an element of equity in vaccine distribution and availability across all states in the country.

Gavi HSS2 will include following sub-activities:

1. Establish eVIN system infrastructure in the additional newer States/UTs

- Carry out pre-assessment baseline survey in all the states
- Recruit and place eVIN Vaccine Cold Chain Manager in each implementing district
- Procure and distribute the eVIN hardware – mobile phone, SIM cards, to every implementing cold chain point
- Procure and distribute digital temperature loggers for each cold chain equipment in the implementing states
- Procure and upgrade the eVIN server capacity to meet the system requirements of all eVIN users
- Print and distribute vaccine stock registers in all the cold chain points in the implementing States

2. Carry out capacity building interventions for the government and UNDP staff on eVIN implementation

- Upgrade, revise and print eVIN training curriculum and material
- Recruit and maintain UNDP national and state teams
- Conduct national ToT for eVIN trainers in the new States
- Conduct state-level trainings for government staff in state, regional, divisional and district vaccine stores on eVIN in all implementing states
- Conduct district level trainings of all cold chain handlers in the implementing states on eVIN
- Conduct refresher trainings in the sub-set of below par performing districts
- Conduct eVIN orientation workshops for district and state immunization officers and other relevant government officials in all implementing states

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3. Maintain and upgrade eVIN software and develop additional modules for enhanced system functionality

- Procure and upgrade the eVIN server capacity to meet the system requirements of all eVIN users
- Provide back end support and troubleshooting, bug fixing and change requests for feedback coming from the cold chain points
- Develop new features and enhancements in the software on a regular basis
- Provide IT troubleshooting service at all levels of eVIN implementation

Sustainability considerations

Overall eVIN provides a robust MIS for the entire vaccine and cold chain inventory in the country which is very crucial for policy makers and programme managers at national and state levels to develop future policy and strategies for improving vaccine and cold chain logistics and supply chain management. The success and relevance of eVIN has convinced GoI (GoI) to make it the mainstay of the national vaccine and cold chain logistics and MIS. GoI is committed to funding the entire cost eVIN in the 12 implementing Gavi states once the HSS-1 funds are over. All eVIN recurring costs – HR, Hardware, Software, Infrastructure will be supported by GoI and be included in state PIPs. Guidelines for states on including eVIN in their respective PIPs have been developed and will be used for the upcoming annual work plan 2017-18.

The eVIN system has been designed in a way that lends to a smooth transition to the state health department right from its inception. The eVIN hardware – smart phones and temperature loggers get handed to the state governments at the beginning of the programme, the entire basic data for eVIN is entered into the software by cold chain handlers who are existing government employees, with UNDP providing technical support, the vaccine cold chain manager who works at the district level is costed at NHM salary rates to ensure a smooth takeover by the state government at the time of eVIN handover. All UNDP staff in the field are placed in the health ministry premises and work closely with the state and district immunization officers thus facilitating a smooth knowledge transfer to the key officials on a daily basis.

Objective 4: To improve demand generation for immunization services to improve coverage and address inequities

The main reasons for low demand for RI have been found to be lack of awareness, low perception of the benefits of immunization, and fear of AEFI. In simple terms, caregivers who do not vaccinate did not know about vaccination, or even if they had, they perceived vaccinations to have little benefit. In addition, the fears resulting from minor symptoms of fever or swelling (whether their own child experienced it or they saw another child in the community) discouraged them to take up vaccines. It increased their hesitancy for immunization.

The health system therefore needs to be fully prepared to understand caregiver's reasons for vaccine hesitancy and develop plans directed at achieving long-term sustainable vaccine confidence.

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Demand-side interventions that are integrated within the health system structures ensuring accountability at multiple levels are therefore critically needed to create a communication momentum for increasing RI demand. One voice communication with consistent messaging across community, facility, digital, mid and mass media through a 360-degree communication at state, district and sub-district levels is proposed to revitalize RI demand. Social mobilization and community engagement are mandatory to tap into community influencers who can educate and activate communities for pro-immunization behaviours. Media advocacy for building vaccine confidence and creating a positive enabling environment that promotes immunization and ensures availability of vaccines and adequate resources is essential.

Activity 4.1: Capacity development of FLWs/ community health service providers on SBCC and IPC through training of master trainers - (UNICEF)

Linkages with Gavi HSS 1

With the objective of strengthening the health system, HSS1 focused on building capacity at the level of the state and district mid-manager health workforce in 12 Gavi-supported states (nine plus three NE states) so as to create a cadre of staff trained in social and behavioral change communication (SBCC). As a result, a resource base of more than 300 State-level Master Trainers and 1400 district-level trainers has been created, thus increasing state capacity to plan, operationalize, and monitor SBCC programming.

A key result has been the shift from IEC dependent demand generation elements of planning to more IPC-driven planning, where IEC materials are justifiably developed as supporting tools. SBCC trainers were selected from within the health system.

HSS 2 will enable supporting specialized refresher training and skills enhancement through customized training modules including a monitoring and supportive supervision plus assessment process. This is expected to improve interpersonal skills among health workers that are necessary to motivate, negotiate with, mobilize communities, and work with influencers for strengthening community support for immunization. This in turn is expected to increase RI coverage through improving the quality of interaction between FLWs and families.

Description of Activities

Taking forward the system strengthening intervention from HSS1, Gavi HSS2 support, will be focused on engaging the SBCC-trained Master Trainers and District-based trainers use a cascade model to increase capacity of FLWs (ASHAs, ANMs, and AWWs) focused on immunization demand generation and counselling.

The FLW training Plan will be a comprehensive plan to cover high priority districts.. The one-day FLW session plan will focus on developing interpersonal (IPC) skills for promoting immunization, mobilizing community, working in partnership, and planning for mobilization activities using planning templates.

It is envisioned that the rollout of FLW training will focus on initially implementing the trainings of the first round. The trainings for AWWs will require further State level coordination and advocacy with the departments and Ministry of WCD. Advocacy will be done with the Health Department to support AWW training jointly as at the sub centre level all FLWs, including

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AWWs work together. The subsequent costs of year two and year three require further commitments from the GOI from NHM budgets.

The following activities will be undertaken with Gavi HSS2:

1. Support a one-day training of trainers: HSS2 support would be used to train the district-based trainers (from among those trained from HSS1), thus enabling reinforcement of skills optimization of system preparedness. Trainer-participants will also include a pool of trainers from the SMNet in UP and Bihar, thus leveraging on the SMNet strengths.
2. Development and printing of training tools: The interactive training methodology will use innovative training tools for building skills and familiarity with the IPC toolkit. Lessons drawn from training experience of SMNets and existing training tools, including the IPC training tool developed and used by WHO in 2012, will enrich the training experience. It will be remembered that when training of health workers is carried out by WHO using the Health worker training module, synergy is created between the training contents and training schedules.
3. Development and printing of IPC and planning tools for FLWs: FLWs need reference support as they get trained. Traditional formats of printed versions that are reader friendly and visually attractive will be complemented by the digital support that ANMs will get from using the ANMOL tool, thus creating the much desired synergy between the different tools to maximize effectiveness of the interventions.
4. Supportive supervision by Master Trainers: These trainers will be key resources for monitoring the district-trainers. Further, they will be key resources for guiding districts to prepare the communication plan at district, block, and session site level using the planning framework.
5. Development of supportive supervision tools: Monitoring-cum-supportive supervision tools, analysis and documentation will be important to measure progress and ensure quality.
6. Documentation: Analysis of monitoring and documentation of training will create a lesson-learned document for strengthening subsequent trainings.

Sustainability considerations

Capacity building is an ongoing, evolving, and dynamic process in health system strengthening, as capacities (knowledge, skills and behaviour) improve only when there is sustained and repeated exposure to knowledge and opportunities to practice the skills. Under HSS2, support is sought for ToTs for master trainers.

Funds for training of FLWs is already being provided in the NHM PIPs. The Trainers are already part of the Health System and will thus be enabled to get state support.

UNICEF will continue to provide technical assistance at various levels of capacity building in SBCC as part of the system strengthening intervention towards generating demand for RI.

New innovative incremental learning methodologies were developed and piloted during HSS1 in states like Chhattisgarh to enable comprehensive trainings in incremental duration. These new methodologies will be shared with states, and technical assistance will be provided by UNICEF to oversee their adoption.

Activity 4.2: Communication planning linked with micro planning to reach high-risk/underserved through SBCC cells in 16 states- (UNICEF)

Along with strengthening existing health workforce capacity, strengthening aspects of leadership and governance relevant to demand generation is important. This intervention aims to place equal importance to strengthen the health system institutional structures with SBCC/IEC relevant mandates to enable policy implementation shift from IEC-based planning to SBCC-driven, thus influencing planning and implementation from State down to the community level.

Linkages with Gavi HSS 1

Under Gavi HSS1, strengthening of SBCC skills and SBCC planning was carried out at two levels – State and district – using two approaches:

1. By strengthening institutional structures dedicated to planning and operationalization of SBCC activities for RI programming (through SBCC cells)

Odisha's Centre of Excellence in SBCC at the SIHFW, Madhya Pradesh's SBCC Cell in the State IEC Bureau, and Uttar Pradesh's SBCC Cell at the NHM State Programme Management Unit (SPMU), through the technical support of UNICEF and partial funding support from HSS1, have provided three different models of institutional strengthening for SBCC in health. Each model is derived out of the specific state's existing structural mandate for health communication, and thus each has its unique strengths while possessing many common features that have enabled outputs in SBCC activities in health and RI. SBCC Cells have become institutions for supporting evidence generation, strategic planning, operationalization, monitoring, analysis, training, documentation, knowledge sharing, including convening partnerships. State strategic plans, district action plans, monitoring dashboards of RI campaigns, development of planning tools, training calendars and training modules, IEC tools production are some of the key outputs from the SBCC cells. Throughout, UNICEF provided the necessary technical and HR support to the government using HSS1 in strengthening the SBCC Cells.

Assessment of effectiveness of state SBCC Cells established during HSS1 is currently ongoing and findings are planned to be available sometime in early June 2017.

SBCC Cells in other states are under development, and need continued support from the national and state governments to strengthen their institutional value and potential for contribution to achieving RI and other health outcomes.

2. By strengthening HR capacity in SBCC skills at levels of state and district

At the state level, state-identified HR from within the health system who underwent trainings in SBCC of RI under HSS1, have been termed as SBCC Master Trainers, and those at the district level were termed as District-level Trainers of FLWs as indicated above

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under Activity 4.1. UNICEF's objective was to support the government in strengthening the system's capacity in SBCC not only to carry out cascade trainings but also contribute to and oversee all planning and operationalization of SBCC activities in Department of Health/SIHF/IEC Bureaus/District health Society. These SBCC-trained HR engage closely with state-level communication units and RI programme managers (thus closely linking to other programmatic initiatives under HSS2) in supporting the integration of SBCC activities during programme planning at state and district levels, supporting the development of state and district action plans. During PIP planning, these SBCC-trained HR would ensure that SBCC activities are well integrated in the PIPs, along with the necessary budgets. Monitoring of SBCC activities and providing supportive supervision would be a key performance indicator for these SBCC-trained HR.

An enabling environment and support from the state will directly enable institutionalizing and embedding SBCC-skills transfer as an important part of RI results. Ultimately, the key outcomes from these investments would result in better strategic plans at both state and district level, and which may show attribution factors in increased demand if all other factors come to play simultaneously.

Description of Activities

The following activities will be undertaken:

Strengthening planning and operational units: UNICEF will support states to strengthen/set-up their SBCC Cells initiated during HSS1. Similar skill building efforts needs to be carried forward in HSS2 in order to strengthen the established units, and based on the lessons learned, support other states to use these models to advocate and influence decision-makers in other States. Under the overall capacity building plan, it is important to distinguish between SBCC orientation programmes and SBCC skills trainings, where not only are different types of participants are engaged but they are also assessed differently. During HSS1, UNICEF supported the government with both types of interventions as below:

- a. SBCC orientations are sensitization trainings aimed at creating basic understanding of the definitions and principles of SBCC. Participants are selected carefully from among programme staff who run technical programmes. SBCC sensitization would enable them to endorse investments in SBCC.
- b. On the other hand, participants in SBCC skills trainings are those who are already engaged in SBCC planning, monitoring, and training. SBCC trainings would lead to a higher level of effectiveness directly resulting in effective integration of SBCC into programme planning and implementation. While an SBCC skills training module may contain a substantial percentage of technical information (primarily programme results), yet the approach, methodology, and tools for conducting such trainings will vary from purely technical trainings, and participant profiles.

Strengthened strategic planning at state and district level: This will entail developing and institutionalizing a robust, strategic planning tool at the district level after reviewing existing tools and using a consultative process with other partners. A good planning tool for communication is necessary. District action plan tools already exist, but HSS2 is a good

opportunity to review the tools and incorporate the necessary changes. Simultaneously, the communication planning tool and microplanning tool will need to complement each other.

Special tribal and urban interventions in four states: In addition to the 12 Gavi states, UNICEF will expand HSS 2 support to four more states to enable interventions in specific geographical areas such as tribal, urban, hard to reach, and remote. UNICEF will support the government specifically owing to falling immunization coverage rates, which is impacting the national FIC rates. The four proposed states are Maharashtra (for urban), West Bengal (for urban and remote), Andhra Pradesh (for tribal), and Tamil Nadu (for urban)

Media skills enhancement along with SBCC: One of the learnings that came forth from HSS1 is that among the participants, all designated MEIOs are accountable also for media management at the district and block levels along with planning and operationalizing SBCC for different programmes. During HSS2, it is proposed that MEIOs undergoing training for SBCC will also be sensitized in local media management as part of the same training. This will involve modifying/customizing the training modules slightly.

Development of a sustainability roadmap for SBCC cells: The Gavi HSS2 will further support developing a concrete roadmap for sustainability of SBCC programming through generating the evidence, capacity building of key health systems professional cadres, and providing standards and procedures for institutionalizing SBCC programming. This is currently proposed to be done at the national level in close engagement of the government and partners, so that there is endorsement and buy-in from the Health System from the start.

Sustainability considerations

The key indicator has been “Number of SBCC Cells at state and district-level being fully state-supported,” which means they are state-owned and operated. Under infrastructural/institutional strengthening, State SBCC Cells in Odisha (set up in SIHFW), Madhya Pradesh (Set up in IEC Bureau), and Uttar Pradesh (set up in SPMU) have been strengthened, and almost 100% institutionalized as they are within the health system. In UP, 18 divisional level cells have already been proposed and approved in the PIP. District-level SBCC cells were set up in Odisha through HSS1. In MP, it has been proposed in the 2017-18 PIP to receive fund support from the state.

HSS 2 fund-support for 3-4 years: States like Odisha and UP have scaled up SBCC cell to district level using state PIP funds. States will be supported to reach an ‘enabling stage’ where the process of SBCC programming can consider itself ‘prepared’ to manage, plan, implement, budget as well as make new investments over the long term linked to health results for children. The lessons learned, as well as key bottlenecks to effectively transitioning SBCC programming will aim to further improve operational as well as technical systems strengthening and transition to inclusion in state PIPs, in all states supported.

Activity 4.3: Strengthening community based multi-stakeholder partnerships-(UNICEF)

At the community level, India has one of the strongest network of ASHA and AWW (1.3 million community-level institutional staff under ICDS) Additional institutional structures exist such as the Village Health, Sanitation and Nutrition Committee (VHSNC), community cooperative Gavi HSS Application Form

groups of women called Self-help groups (SHGs), community-based organizations (CBOs), and numerous other informal and formal networks and groups. At the level of provision of quality health services is through the hospital management system called the Rogi Kalyan Samitis (RKS). This group has a direct say in the improvement of infrastructure and services in the CHCs and PHCs at the block level.

However, India's challenges are unique, with a huge diversity in geographical regions, cultures, economic barriers, education levels, conflict regions, making many groups and areas inaccessible or hard to reach despite the government's best intentions and a large network and deployment of resources. For example, as per Census 2011, ten states (Madhya Pradesh, Maharashtra, Odisha, Gujarat, Rajasthan, Jharkhand, Chhattisgarh, Andhra Pradesh, West Bengal, and Karnataka) account for 83.2% of the total ST population of the country. Another 10 states (Assam, Meghalaya, Nagaland, Jammu & Kashmir, Tripura, Mizoram, Bihar, Manipur, Arunachal Pradesh, and Tamil Nadu), account for another 15.3% of the total ST population. Six states (Lakshadweep, Mizoram, Nagaland, Meghalaya, Arunachal Pradesh, Dadra & Nagar Haveli,) are predominantly tribal states/UTs where ST population constitutes more than 60% of their total population. Of the total 594,000 villages in the country, there are 105,295 villages and 57 urbanized areas which have more than 50% ST population in the country. While the SC population is more widely spread over both in rural and urban areas, the ST population prefers to live in groups predominantly in rural surroundings. In many of these areas, geographically hard-to-reach conditions, conflict, and detachment from the mainstream pose unique challenges for health service providers.

HSS2 support therefore rightly calls for a separate tribal strategy. However, it also draws our attention to the need for a greater investment in partnerships overall, not only for tribal areas but also for the many ethnic groups, religious, low socio-economic groups, and communities spread across in rural, semi-urban and urban areas. Access to information, mobilization, and lack of vaccine confidence continue to remain major gaps, and needs larger partnership support to overcome the challenges.

Learnings from CSO Partnership in Gavi HSS-1

Under Gavi HSS-1, a number of Gavi states initiated and experimented with different models of partnerships, which has provided rich lessons to enable strengthening the Gavi HSS2 CSO partnership investment. In conflict regions of Jharkhand state, faith-based organizations were engaged to reach RI messages to the community and encourage vaccination.

An example of an initiative taken by UNICEF under HSS1 to achieve equity in RI in Jharkhand state is given in **Annexure 6**.

Similarly, in inaccessible regions of Gujarat, NGO partnership is helping the Health System to achieve community mobilization and communication monitoring. In Assam, engagements with Tea-Garden owners' associations and women worker groups was explored to reach out to tea-garden communities; and partnership with academic institutions enhanced programme management skills.

The SMNet is a living example as a methodology of multi-level CSO partnership – from small community-level networks to large private-sector groups that contributed immensely to

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achieving the Polio eradication goal. For Gavi HSS-2, learnings from SMNet CSO partnership will be adopted to scale-up the partnership model in other states.

Areas of support from CSO partnerships

Some of the major reasons identified for low demand for child vaccination are lack of awareness, low perception of need for vaccination, and fear of adverse events following immunization (leading to low vaccine confidence), together indicating gaps in demand generation service delivery. The current institutional structures are in place but need the necessary support to strengthen the service delivery component. Therefore, initially, three areas of support have been identified under CSO partnership:

1. Community mobilization
2. Monitoring
3. Capacity building

Other areas where CSOs can effectively contribute to health system strengthening are in evidence generation, innovations, micro-planning, facilitation in hard-to-reach areas, and even mobilization of funds and strengthening infrastructure in health facilities.

The following 4 key activities will be carried out with Gavi HSS2 support in each of the Gavi states:

1. **Communication gap assessment for partnerships:** By identifying the key communication gaps and communication needs for segregated populations (at district level), need for specific partnerships will be matched. Lessons from SMNet will be drawn to achieve this output in the shortest possible time frame.
2. **Mapping of key partners in the state and consultations:** Credible CSO partners, who have previously worked with government and have gained the necessary confidence, and have reasonable resources, will be mapped and consulted for potential partnerships.
3. **Capacity building of partners:** Partners will come with different strengths and challenges, and will have to be oriented on the key objective of Gavi results. Capacity building will be carried out in close collaboration with the state health system, with oversight from the national government.
4. **Monitoring of partnership activities:** Monitoring, supportive supervision, and assessment of performance will be a key activity to enable resource investment has been optimized.

Sustainability considerations

The single-most important criteria for partnership in Gavi HSS-2 will be the potential in the partnership to get institutionalized as a catalysing process to accelerate RI outcomes. Any useful partnership will demand extensive investment of resources, most importantly to ensure that the partnership is able to fill gaps or complement the efforts being made by the Health System. Under Gavi HSS-2, the aim will be to nurture long-term partnerships between the Health System and CSOs that can continue when Gavi support ends. Gavi HSS-2 CSO partnership engagement should provide adequate learnings to develop guidelines for establishing and institutionalizing CSO-partnership to achieve equity and coverage in Routine Immunization. The guideline would facilitate identifying the most strategic partnerships at different levels.

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Activity 4.4 Effective use of Polio assets and strategies for RI health systems strengthening, innovations for communities outreach activities and SMNet- (UNICEF)

Social mobilization network (SMNet) was created as a strategy engaging more than 7,000 community mobilizers to eradicate polio by improving vaccination rates in underserved, marginalized and most at-risk communities in India.

Role of SMNet in RI

As part of the Polio Endgame Strategy, the SMNet is now focusing on boosting RI via working with the government to strengthen communication planning, capacity development, social mobilization, media sensitization, monitoring, supportive supervision and evidence-based, real-time planning for RI activities. SMNet reaches 2.2 million children in some 2.7 million households with lifesaving messages related to immunization services in some of the most underserved, marginalized and at risk communities in India.

Linkages with Gavi HSS 1

Total 228,999 IPC sessions (Mother Meetings) held from January 2014 to August 2016 much more than targeted 168,000 meetings. In addition, 5 million house to house IPC sessions were also made on RI from January 2014 to August 2016. As an impact of the network interventions together with other eradication efforts, these high-risk pockets experienced an increase in RI coverage from 70% in 2011 to 79% in 2015 in Uttar Pradesh and from 69% in 2011 to 85% in Bihar in 2015. (Source: SMNet MIS).

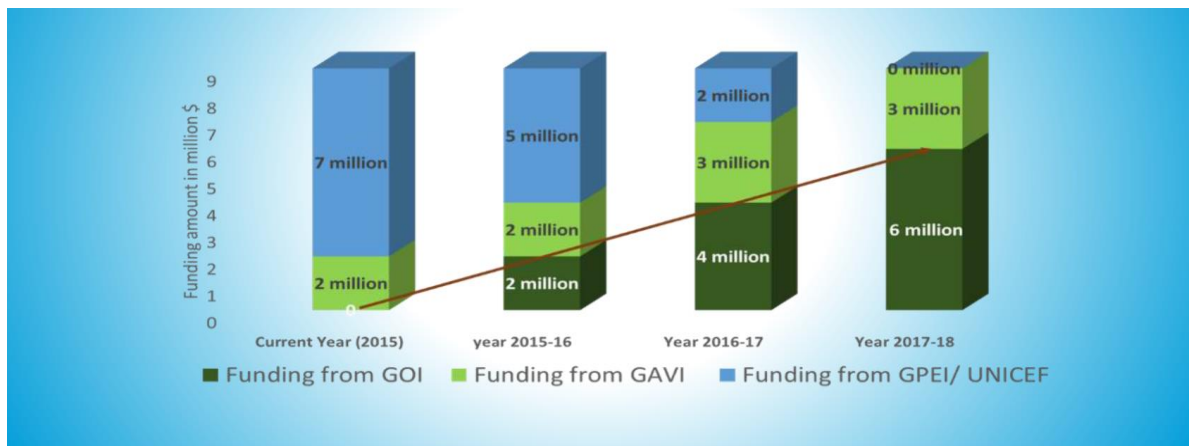
Description of activities

The following activities will be undertaken:

1. **Creating awareness and mobilization:** Under Gavi HSS2 SMNet will continue creating awareness and mobilize communities for RI in high risk areas of UP and Bihar. Each SMNet mobilizer will engage with around 350 families in IPC sessions to reinforce correct information on RI to mobilize families before every immunization session.
2. **Strengthening mothers' meetings:** The community mobilisers will also hold mothers' meetings and religious meetings to advocate for RI services; coordinate mosque announcements and will conduct immunization meetings in madrasas and various religious congregations. Each community mobilizer will conduct one mother meeting per month and IPC sessions with minimum ten families (with target age group children) per month in underserved communities of Uttar Pradesh and Bihar. Meetings and IPC sessions will target parents/ caregivers of drop out and left out children based on community mobilizer's field book and immunization due list. CMCs will make the plan for the mothers meetings and IPC sessions detailing the target households, objective of the discussions, attendance and motivate the mothers/ caregivers to access the RI services.
3. **Support in communication planning and capacity building:** SMNet will continue its support in communication planning, capacity building, and a monitoring and supportive supervision systems for RI.
4. **Support to MI in other states beyond UP & Bihar:** SMNet will also continue its support for MI in SMNet states and also other high priority states by deploying SMNet consultants

in these high priority states to build local capacity for RI communication planning and implementation.

Sustainability considerations



As SMNet transitions out of donor funds, HSS2 funds is expected to provide for 33% of total requirement and Gol will be contributing remaining funds. These funds will be utilized in conducting social mobilization activities in underserved areas of two highest priority states (UP and Bihar) with maximum number of not fully immunized children in the country.

Gol and UNICEF reached a historic agreement on the transition of the SMNet in November 2015. MOHFW agreed to fund the states of UP and Bihar for the SMNet progressively leading up to March 2018. Thereafter, the states will have to determine the funding and future of SMNet. The UP government covered approximately 18% of SMNet costs for 2015-2016, and 42% 2016-2017; and Bihar government will cover 49% of SMNet cost for 2016-2017 and 63% for 2017-2018. Gavi contribution in HSS1 was \$ 2 million per year (21.7%) and remaining contribution was from UNICEF, GPEI partners and Gol.

Activity 4.5 Communication monitoring and supportive supervision through use of standardized formats, dashboard analysis- (UNICEF)

Linkages with Gavi HSS 1

Under MI (MI), monitoring of communication activities across all state, district, PHC and session site levels was undertaken through Gavi HSS 1. This stringent monitoring of communication activities resulted in increased focus, as well as (need and use for) generation of data on communication planning and state level implementation of communication-related activities for demand generation. In addition, district communication plan availability improved from 50% in the April 2015 MI phase 1 round to 80% in July 2016 in MI phase 3.

Description of activities

The following activities will be undertaken:

Systematic monitoring of communication activities for Routine Immunization and immunization campaigns will continue. A web-based interactive performance management tool using the monitoring data will be developed for generating dashboards on key indicators that will be Gavi HSS Application Form

used for performance tracking and corrective action. The grant will focus on enhancing participation of government to generate evidence for communication planning and implementation through easy to use mobile based application and real time data analysis and action

Sub-activities:

1. Deployment of monitors to high priority states for monitoring of RI and MR campaign.
2. Adaptation of the M&E tool and development and printing of communication dashboard

Sustainability considerations

All monitoring web-based tools will be developed in NCCMIS server, which is Gol MIS system. In the first year, Gavi HSS2 funds will be used to develop web-based tools, using SMNet personnel. Later, UNICEF and Gol will focus on increasing participation of state government officials and health supervisors and Gavi funds will only contribute in generating dashboards at national and state level. System will continue beyond Gavi support through regular monitoring of communication activities by government HR and using Gol web based tools.

Activity 4.6: Communication/mass media campaign development/support for common messaging at all levels- (UNICEF)

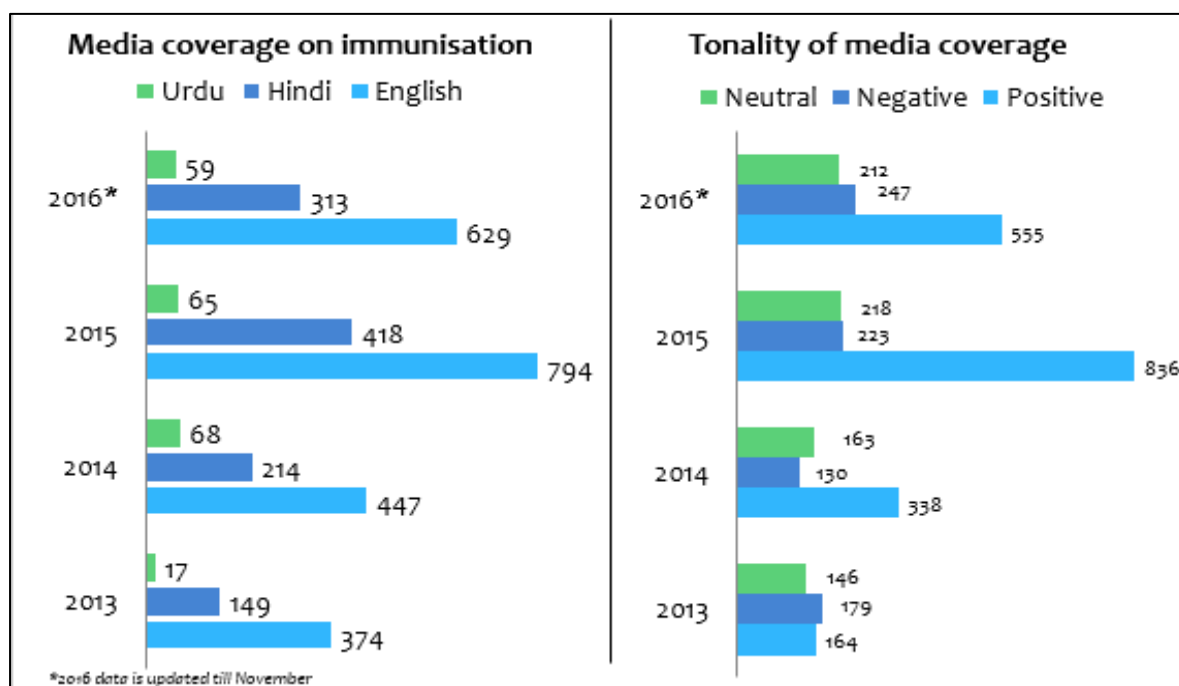
A key facet of this programme is to create an enabling environment around the value of vaccines. This is done by engaging with diverse influencers whose voices can enhance the value of vaccine. Media is the most critical of these stakeholders and a key point to note is that any adverse reporting on their part can greatly hamper the uptake of vaccines and almost stall a programme. Therefore it becomes crucial to consistently engage with them and especially build a strong equation between the media and the government spokespersons and communication professionals.

Linkages with Gavi HSS 1

During HSS 1, the focus was on mapping the key media writing on health and immunization; engaging with these media and predisposing them towards the diverse issues of immunization; creating a strategy to engage with Radio and Urdu media focusing on the equity perspective; developing the critical appraisal skills programme to develop capacities of key media professional and students across the country; spokespersons' training for State and District Immunization Managers (SIO, DIOs, CMOs, etc.) to build their capacities on proactive and reactive communication response for RI ; partnerships with Goodwill Ambassadors and celebrity advocates who have the influence to catalyse further dissemination of RI information and media monitoring. Timely intelligence from the daily monitoring and quarterly analysis was strategically used to identify opportunities as well as track and address negative coverage around immunization. Further, the analysis helped in identifying potential risks and threats to the programme. The proactive engagement resulted in positive outcomes on media coverage in the recent years (**Figure 10**).

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Figure 10: Media coverage and tonality



Description of activities

The following activities will be undertaken:

The focus of all the above activities was to put in place a media engagement strategy for immunization. Prior to the Gavi HSS1 funds, there was never a clear focus on engaging with the media only around immunization. After an initial mapping of the key media writing on immunization and more specifically the radio and Urdu media, the HSS2 funds will enable us to:

1. Build on these partnerships by **creating a network between the government spokespersons and this identified media** through field trips, roundtables and workshops. Government spokespersons from the national, state and district level will engage with this media to develop an independent partnership with them. The spokespersons and information officers will nurture and build partnerships with the specific media identified through these interactions. The end result should be that the radio and urdu media consider the government information officers their key focal contacts for any information / stories on immunization.
2. **Spokespersons training to manage AEFI's will also be completed.** The "critical appraisal skills program" will be implemented and key journalists and media students will be trained on this. This will enhance their capacities to report constructively on immunization.
3. **Engage the celebrity advocates for immunization related communication.** Example, Mr. Amitabh Bacchhan will continue his support to any communication for immunization, led by the Gol and facilitated by UNICEF. Even after the HSS2 funds, these celebrities will give their time free of cost to the immunization programmes of the Gol.

4. Develop a qualitative media analysis tool. This is crucial to understand the generic media discourse and how it will impact the uptake of vaccines. Also, through this qualitative assessment we will understand the voices of diverse influencers and how they support the value of vaccines. In addition, the information officers will be sensitized on the media monitoring tools and analysis so they can even monitor outputs in their own work.

Sustainability considerations

Strategic media advocacy is an important area of work to evolve and sustaining the discourse around the value of vaccines and immunization. Through Gavi HSS1 funds, UNICEF supported the initiation of some key innovations in partnerships as well as capacity development for the media. These have been crucial in building a strong foundation for work with the media so that a credible and meaningful discourse on immunization can be ensured. A key facet has also been to engage with media around AEFI cases. Media has the power of escalating an AEFI story in a manner that can really devalue the intense work done around building an enabling environment for immunization. And UNICEF's continuous engagement with the media and developing their capacities under HSS1 has enabled the Government of India to manage AEFI stories as well as enhance positive coverage in the media.

The transition plan is twofold:

1. To work closely with the DGPROs and Information Officers across the country to develop their capacities on managing AEFI news and to be equipped to speak about immunization proactively.
2. Through an agreed partnership with the Association of Radio Operators of India, who will continue to support this engagement and involve the private sector as well, to generate meaningful programmes on the importance of immunization. Further, radio channels have assured UNICEF that they will continue to support after this engagement is institutionalized over the next two years with HSS2.

Regarding capacity development, the CASP programme has been a strong innovation using HSS1 funds. Conceptualized with Oxford University and Reuters Foundation, this programme was piloted with the Indian Institute of Mass Communication. HSS2 funds will be used largely to put the mentorship programme (with Reuters Foundation in place) for journalists to write more responsibly on RI issues. Also, the funds will be used to create an online learning module on health communication for journalists across the country.

The transition strategy for this activity is already discussed with IIMC and various media outlets who have committed to continue to train and mentor their employees on CASP for RI after three to four years.

Section 11: Results Chain (Maximum 4 pages)

Complete the **Results Chain** using the template provided below. For each objective defined in Question 12, provide information on: (i) activities (as noted in Question 13); (ii) intermediate results; (iii) immunisation outcomes; (iv) impact; and (v) assumptions for the achievement of results.

Once the Results Chain has been developed, the next step is to complete the **Performance Framework** (for all HSS applications i.e. including for applications for pooled fund support). This can be accessed through the Gavi country portal: www.Gavi.org

Results chain		
Objective 1: → Insert objective 1 here		
<p>Key Activities:</p> <ul style="list-style-type: none"> ▪ Add text here on the key activities only... ▪ Complete at most 2-3 indicative activities for each objective 	→	<p>Intermediate Results:</p> <ul style="list-style-type: none"> ▪ Add text here...
<p>Related Key Activities Indicators:</p> <ul style="list-style-type: none"> ▪ Add text here on the indicators related to the key activities detailed above... 	→	<p>Related Intermediate Results Indicators:</p> <ul style="list-style-type: none"> ▪ Add text here on the indicators related to the Intermediate Results detailed above...
	→	<p>Immunisation Outcomes:</p> <ul style="list-style-type: none"> ▪ Include all of the five mandatory outcome indicators and include other relevant indicators as appropriate ▪ Add text here...
Objective 2: → Insert objective 2 here		
<p>Key Activities:</p> <ul style="list-style-type: none"> ▪ Add text here on the key activities only... ▪ Complete at most 2-3 indicative activities for each objective 	→	<p>Intermediate Results:</p> <ul style="list-style-type: none"> ▪ Add text here...
<p>Related Key Activities Indicators:</p> <ul style="list-style-type: none"> ▪ Add text here on the indicators related to the key activities detailed above... 	→	<p>Related Intermediate Results Indicators:</p> <ul style="list-style-type: none"> ▪ Add text here on the indicators related to the Intermediate Results detailed above...
	→	<p>Immunisation Outcomes:</p> <ul style="list-style-type: none"> ▪ Add text here...
Objective x: → Insert more rows as required		
<p>IMPACT</p> <p>Provide an impact statement and indicator(s):</p>		

ASSUMPTIONS

List any assumptions:

Objective 1: To strengthen and maintain robust data systems to improve evidence based decision making

<p>Key Activities</p> <ul style="list-style-type: none"> • Concurrent monitoring • VPD surveillance • ANMOL 	<p>Intermediate Result</p> <ul style="list-style-type: none"> • Concurrent monitoring data shared for informed decision making at national, states and districts level • Expansion of VPD surveillance in additional states • Timely availability of ANMOL data
<p>Related Key Activities indicators</p> <ul style="list-style-type: none"> • No. of RI sessions where concurrent monitoring conducted • No. of states where ToTs conducted for VPD surveillance • No. of States which introduced ANMOL 	<p>Related Intermediate Result Indicators</p> <ul style="list-style-type: none"> • Proportion of national immunization review meetings that discussed concurrent monitoring feedback provided • No. of states where VPD surveillance started • Percentage registration of infants in RCH portal (intervention states)

Immunization Outcomes

- Full immunization coverage
- Pentavalent 3 coverage at the national level (Penta 3) %
- Measles containing vaccine (first dose) coverage at the national level (MCV1)
- Drop-out rate between Penta1 and Penta3

Objective 2: To improve capacity of human resources for service delivery and programme management for equitable and efficient immunization services

<p>Key Activities</p> <ul style="list-style-type: none"> • Capacity building • Urban immunization • Tribal immunization 	<p>Intermediate Result</p> <ul style="list-style-type: none"> • Trainings conducted by master trainers • Strategies for tribal immunization developed • RI micro plan developed in implementing cities
<p>Related Key Activities indicators</p> <ul style="list-style-type: none"> • No. of state ToTs conducted on MO immunization handbook/ health worker • No. of cities with high risk areas identified • No. of models developed for addressing different tribal issues across states 	<p>Related Intermediate Result Indicators</p> <ul style="list-style-type: none"> • Percent of districts conducted district level trainings after state ToT on MO immunization handbook/ health worker • Developed strategies for immunization programme in tribal areas • No. of cities with RI micro plans developed

Immunization Outcomes

- Full immunization coverage
- Pentavalent 3 coverage at the national level (Penta 3) %
- Measles containing vaccine (first dose) coverage at the national level (MCV1)
- Drop-out rate between Penta1 and Penta3

Objective 3: To strengthen vaccine logistics and cold chain management

<p>Key Activities</p> <ul style="list-style-type: none"> • eVIN • Capacity building for cold chain management 	<p>Intermediate Result</p> <ul style="list-style-type: none"> • Real time vaccine stock management and remote temperature visibility established and utilized across additional 24 states • Increased knowledge, skill and capacity of CCH, CCT and programme managers in vaccine logistics and cold chain management
<p>Related Key Activities indicators</p> <ul style="list-style-type: none"> • Percent Cold Chain Handler trained on eVIN • Percent of CCT trained on ILR-DF new module 	<p>Related Intermediate Result Indicators</p> <ul style="list-style-type: none"> • No. of states maintaining eVIN adherence rate > 90% • Assessment of technical skills by CCTs for CC Management (Performance assessment study, one time activity)

Immunization Outcomes

- Full immunization coverage
- Pentavalent 3 coverage at the national level (Penta 3) %
- Measles containing vaccine (first dose) coverage at the national level (MCV1) %
- Drop-out rate between Penta1 and Penta3
- Cold chain sickness rate maintained within 2%

Objective 4: To improve demand generation for immunization services to improve coverage and address inequalities

<p>Key Activities</p> <ul style="list-style-type: none"> • Capacity building and planning on communication • SMNet • Media engagement 	<p>Intermediate Result</p> <ul style="list-style-type: none"> • ANM and ASHAs/ link workers trained on RI-IPC by master trainers • Information on RI sessions through Community mobilization coordinators (CMC) in hard to reach and underserved areas • Enhanced positive media coverage related to immunization
<p>Related Key Activities indicators</p> <ul style="list-style-type: none"> • Number of facilitators trained in SBCC/ IPC skills • Number of Mother Meetings held using the polio SMNet in underserved areas of UP and Bihar • Number of media spokespersons from the government trained 	<p>Related Intermediate Result Indicators</p> <ul style="list-style-type: none"> • No. of ANMs and ASHAs trained on RI-IPC by master trainers • % caregivers reported they received RI session information through CMCs in underserved areas • Percent of positive media information on RI in English and Hindi print, TV and Radio

Immunization Outcomes

- Full immunization coverage
- Pentavalent 3 coverage at the national level (Penta 3) %
- Measles containing vaccine (first dose) coverage at the national level (MCV1)
- Drop-out rate between Penta1 and Penta3

12. Monitoring and Evaluation (M&E) (Maximum 2 pages)

Provide a description of how HSS grant performance will be monitored and evaluated.

To coordinate and facilitate the review and monitoring process, a project management cell (Gavi Secretariat) will be established at UNDP. This cell will collect the reports from states and other stakeholders; compile and analyse the reports and present them to the IAG for action. As programme evaluation is an integral part of the Gavi proposal, partners have put aside a separate budget for the evaluation of the Gavi HSS programmes.

Regular meetings will be held among MoHFW, lead implementers, ITSU and PMC-Gavi Secretariat at UNDP to review progress of activities implemented and results achieved against the milestones on a monthly basis. At the national level, the IAG, chaired by Joint Secretary (RCH) will meet every quarter to review the progress, discuss the challenges and to take the corrective actions.

At the request of GoI, States have established, state and district task forces on immunization to review the progress of UIP and to take corrective actions. These platforms will be utilized to also include the review of work done through Gavi HSS. Progress will be reported through the Gavi annual progress report to be submitted by MoHFW; reporting will be based on the NRHM state reports and the common review mission reports. Performance indicators have been developed to measure the output, outcome and impact of each objective of the HSS proposal.

A baseline and midterm evaluation of the work under the GAVI HSS grant is planned. A robust log frame will be instituted for the grant funding and a performance framework matrix to record the baseline and progress against target will also be instituted.

PART D: WORK PLAN, BUDGET AND GAP ANALYSIS

13. Detailed work plan, budget narrative and gap analysis (Maximum 2 pages)

*Complete **Mandatory Attachment #6: Detailed work plan, budget and gap analysis**, which can be accessed at the online country portal.*

Detailed instructions to fill in the budget template are available in the first worksheet of the Excel template.

*Once the budget template and financial gap analysis has been completed, provide a **budget and gap analysis narrative** here.*

PART E: IMPLEMENTATION, FINANCIAL MANAGEMENT AND PROCUREMENT ARRANGEMENTS

14. Implementation arrangements *(Maximum 2 pages)*

Describe the planned implementation arrangements

The overarching goal of the activities proposed in the Gavi HSS 2 proposal is to improve the quality and level of immunization coverage in India and prepare for the adoption of new antigens by catalysing the development of immunization programme that is capable of high performance even in settings where the capacity of the regular government infrastructure is limited. The proposal is in alignment with national targets and focuses on improvement on both the supply side and demand side of RI and policy-making to guide programmatic improvements and expansion of the UIP.

MoHFW is committed and working towards addressing some of the key HSS constraints outlined above in Section 8. These initiatives are also supported by several external donors' programmes in areas of HSS. The HSS components suggested above in section 9 to be funded by Gavi seek to address the constraints that are still partially met/addressed by the available MoHFW funding and activities, and therefore Gavi funding is intended to be additional and catalytic.

MoHFW has exploited the potential benefits of planning Gavi HSS phase 2 proposal from 2017-2021 consistently with our broader cMYP. Gavi HSS grant is being viewed as a critical opportunity to address the underlying causes of "flattening coverage", to reach missing children through every health worker, community worker and facility in the country's health sector. No parallel structure or mechanism has been created in favour of management and implementation arrangements within the already existing authorities, institutions and coordination mechanisms at national, state and district levels.

The budget of Gavi HSS Phase2 support is being tailored for activities as meaningful allocation of funds and activities in geographical areas and over time considering coverage and equity issues.

As required by the guidelines and keeping an open understanding, lessons learned and linkages with previous or on-going HSS grants are sufficiently considered in this new HSS application, or and just not limited to the situation analysis but also applying lessons learnt to substantiate the proposed priorities and activities. Also, the role of the HSS grant in strengthening systems for the introduction of new vaccines has been diligently explored and developed.

The four lead implementers, UNDP, WHO, JSI and UNICEF will work in close collaboration and Gavi Secretariat (Project management Cell) will monitor the progress of the proposed activities with the overall stewardship of Immunization Division at MoHFW.

The process will be monitored by Immunization Action Group (IAG) with Joint Secretary (RCH) as chairperson, MoHFW officials and development partner representative as members. The IAG may meet quarterly.

The Deputy Commissioner (Immunization) and Deputy Commissioner (UIP) along with officials from lead implementers will provide technical oversight in to respective components of the project (including programme planning, implementation, monitoring and evaluation and reporting). They will be assisted by a team of other professional officers including specialists in procurement & cold chain and epidemiologists.

At state, district and below levels the state teams of lead implementers will coordinate with National teams regarding technical and managerial issues related to the Project. In addition, short term national/international consultants will be hired on specific focus areas for supportive implementation and review or evaluation of the project activities.

Risk assessment and management will be an integral part of Project management. An on-going process of risk identification, analysis, planning and control will be ensured through local level planning and periodic review at various levels.

WHO

WHO-NPSP field structure comprises 279 unit offices, 40 Sub-Regional Team Leaders, and 6 Regional Team Leaders covering all states and union territories of country.

For regular review of implementation of activities WHO-India has supervisory structure in the field in form of sub-regional team leader (SRTL), regional team leader (RTL) and regional A&F officer (RAFO). The field units are supervised by country office at national level.

There are mechanisms in place for quality assurance reviews (QAR) at regular basis, integrated audits and external audits. Each field unit undergoes QAR through RTL/ RAFO visit or independent external audit annually.

UNDP

For the eVIN implementation, UNDP has a national team at Delhi already and will add additional staff as needed in the Delhi office. The implementation structure in all the states is standard and will be similar to that in HSS1. The state headquarter will be staffed by 3 people including the state team lead, IT officer and admin and finance assistant. This team will sit in the state health ministry office and work in close coordination with the state immunization officer. At a cluster of 10 districts (region) a project officer – Operations will be based to oversee and manage daily work in the region. These officers will be based in the office of the respective district immunization officer and will coordinate the work of the regional and district vaccine stores as well. Each district will be staffed by a Vaccine Cold Chain Manager (VCCM) who will be based in the office of district immunization officer and coordinate the eVIN work and supportive supervision to all the cold chain handlers in the district.

UNICEF

UNICEF-India has 13 field offices at state headquarters and in other states operations are handled centrally by the Country Office in New Delhi.

UNICEF is the key partner of Gol in RI, polio eradication, measles control and new vaccine introduction. UNICEF reviews all the activities conducted at state and national level on regular basis and conducts mid-year review and end year review on annual basis.

Specific consultants for capacity building/partnerships will be hired through HSS2 at the state level to support the State Immunization divisions and UNICEF to achieve the set objectives. They will be strategically based at the State SBCC Cell/RI division based on the key parameter of optimizing their support to the state. These consultants will be regular but short-term and all efforts will be made to transition them to the State PIPs so as to ensure continuity of the programme and sustainability.

15. Involvement of Civil Society Organisations (CSOs) *(Maximum 1 page)*

Describe how CSOs will be involved in the implementation of the HSS grant.

RI demand generation has to engage multiple stakeholders to create a support base and enabling environment for promotion of RI and new vaccine introduction. The specific strengths of civil society organizations, private sectors, networks and other organizations can be strategically harnessed for potential partnerships to increase vaccine confidence and uptake, as well as facilitate the integration of RI with other child health interventions.

The CSOs that are involved in health care contribute in multiple ways, often acting as intermediaries between communities and governments, by creating demand for, as well as providing services in response to community needs, adapted to local conditions and lobbying for equity and pro-poor health policies. The CSOs reach remote and underserved areas and populations, providing a range of technical skills from planning to service delivery. Acting as catalysts, CSOs also contribute to public understanding and enhancing of public information, thus building better and more effective interaction between services and clients and enhancing community control over health interventions.

These organisations have played a pivotal role in contributing to certain achievements in India's public health sector, especially in polio eradication and RI. It is evident that polio eradication efforts created opportunities to deliver other interventions but often those opportunities could not be used due to lack of infrastructure. With timely and appropriate involvement of CSOs at different levels, these will be tapped to improve equitable immunization coverage.

Strengthening ongoing multi-stakeholder partnerships with community-based (district, block, and village level) institutions and engaging different CSOs networks of national and state presence, professional bodies such as IAP/IMA, in order to create an influencer/ambassadors that can play a role of positive advocates for the immunization programme, reinforce the reach of demand generation in communities will be essential in facilitating mobilization and motivating communities for uptake of RI and new vaccines. Different networks and partnerships that have already been engaged and will be further strengthened include influencers' (religious, occupational and community) network, Village Health Sanitation and Nutrition Committees, Rogi-KalyanSamiti, Self-help Groups, Mahila Smakhya; partnership with local-government institutions including State Institute of Rural Development, Panchayati Raj Institutions, municipal bodies; partnership with folk-culture for

indigenous tribes, faith-based organizations etc., partnership with academic institutions and engaging members of the Alliance for Immunization in India.

Any CSO partnership will have to be developed keeping in mind the specific state environment. During HSS2, the aim will be to support the Health Department/RI division to establish mechanisms that would facilitate identifying the most strategic partnerships at the state level, based on criteria for identification of CSO partners with related mandates, as well as presence. Through engaging different CSOs networks of national and state presence, professional bodies such as IAP/IMA in specific advocacy, demand generation interventions for RI. Involving in periodic technical/ programmatic reviews, planning processes, maximizing their support to validate data as well as outreach interventions these partnerships should help close the gap in uptake in RI, especially in hard to reach areas.

16. Financial management and procurement arrangements *(Maximum 1 page)*

Describe the proposed budgetary and financial management mechanisms for the grant.

If financial management arrangements include plans for Gavi funds to flow to partners outside government entities, please justify.

UNDP

UNDP works to improve access to quality assured supplies in a cost effective and reliable way. We do this by abiding the following principles: Best Value for Money, Fairness, Integrity and Transparency, Effective International Competition and in the best interest of UNDP.

UNDP follows a series of policies to safeguard the implementation of the procurement process: Article 100 of the Charter of the United Nations; UNDP Financial Regulations and Rules; UNDP Financial Resources Management Policies and Procedures; UNDP Internal Control Framework; UNDP Contracts, Asset and Procurement Policies and Procedures; UNDP Policy on Fraud and Other Practices.

UNDP has several units that supports directly any country office to safeguard UNDP's accountability and procurement principles. They include: the **Office of Audit and Investigations (OAI)** – main role to prevent, identify and address all acts of fraud against UNDP, whether committed by UNDP staff members or other personnel or by third parties; the **Legal Support Office (LSO)** - The provision of timely, high-quality and practical legal advice to country offices; the **Procurement Oversight Unit (POU)** - To ensure that procurement undertaken by UNDP business units complies with procurement policies and procedures as well as financial rules and regulations, taking into account best practices and risk mitigation measures; **Ethics** - assist UNDP staff and other personnel to perform to the highest standards of integrity, required by the Charter of the United Nations; the **Procurement Services Unit (PSU)** provides direct support to country offices to ensure transparent purchasing processes that provide UNDP with the best value for money, specifically.

UNDP India involves as many Offerors as possible in its procurement process, and this is the underlying goal whenever a UNDP procurement staff approaches the market to find the best vendor that meets its requirements. The manner of approaching the market is

determined by a variety of factors, and each selection method requires different inputs, templates, and responses. These methods may be summarized as follows: micro purchasing, Request for Quotation (RFQ), Invitation to bid (ITB), Request for proposal (RFP) and Direct contracting (DC). Furthermore, depending on the nature of the requirement, and the total contract value involved, UNDP adopts any of the following types of competition: Open International Competition, Limited International Competition and National Competition.

JSI, UNDP, WHO and UNICEF specific financial arrangements will be used for the Gavi HSS2 funds.

A specific award number will be given to Gavi funds. Use of funds can be monitored and tracked using this number.

The fund, as usual will flow into HQ accounts at HQ level from Gavi and country offices can use it as per the plan. This is the easiest method as no additional system or staff is required to manage funds

The overall oversight of the programme rests with the Country Representative in India, who is supported by team of Technical Officers and administrative staff both at Country and Regional /HQ office level.

The decision making and approval process is based on an approved delegation of authority from Regional Director to the Country Representatives. All four development organizations viz. UNICEF, UNDP, WHO & JSI will execute their own systems such as routine compliance reviews and audits conducted by both internal auditors and external auditors. All UN organizations viz. UNICEF, WHO & UNDP as well as JSI has routine internal compliance reviews for both financials expenditures and procedures.

The Annual planning and budgeting for each sector will be approved by the Country Representative of implementing partners and government counterpart.

UNICEF

Financial Management

Payment execution is centralized at country office in New Delhi (UNICEF field offices do not have their own bank accounts), however for funds expended by UNICEF field offices, the review and approval of invoices takes place at field office level. UNICEF operates under the system of Harmonized Cash Transfers (HACT) and in line with micro-assessment of implementing partner, funds may be disbursed to contractors as an advance (covering max. 3 months of activities), on reimbursement basis or as direct payments.

The main implementing partners for Gavi HSS, will be entities UNICEF has worked with before, namely the National Cold Chain Testing Center in Pune, the National Cold Chain and Vaccine Management Resource Center in New Delhi, the National Institute of Health and Family Welfare, State Institutes of Health and Family Welfare, medical colleges and different service providers under Long Term Agreements.

Internal Audit

IA is performed by the Office of Internal Audit and Investigations, typically every 2 years for the country office and a sample of zonal offices in India. In addition, the Country office's finance teams performs so-called "Assist Visits" to State Offices, typically lasting 1-2 days, to verify whether finance operations are executed in line with UNICEF's rules and regulations and funds are used for their intended purpose.

Also, implementing partners of UNICEF receiving more than USD \$100,000 per year are subject to an external audit, either by an independent external audit firm or UNICEF staff.

External Audit

EA is performed by the United Nations Board of Auditors, typically visiting the India Country office every 2 years for their review

Procurement

The cold chain related equipment and spare parts will be procured internationally through the UNICEF supply division in Copenhagen.

ANMOL tablets will be procured nationally at country office in New Delhi through competitive bidding process (no procurement performed by sub-national offices)

Services will be procured according to the LI's applicable guidelines, either selected specifically for the Gavi HSS programme in a transparent procurement process or in accordance with an existing Long Term Agreement (LTA) between a contractor and the LI.

Describe the main constraints in the health sector's budgetary and financial management system.

In the financial area, all UN agencies and JSI has a stringent system of scrutiny for release of funds to programme activities. UN agencies also take note that the counterparts in the Government are aware of their strict financial requirements and follow the entire requirement and their Annual plans. The health sector's financial management system experience has been acceptable as far as implementing partners are concerned.

One of the challenges in health sector financial management system is disbursement of fund and collecting the information from field locations, which at times delays the processes.

Following is the Budgetary allocation for RI

In the year 2012-13, Government funded 90% of RI programme by domestic funding; WHO and UNICEF contributed 4% and 3% respectively.

In the year 2013-14 RI is 93% funded by Gol, 5% by WHO, 2% by UNICEF.

In 2014-15, Gol funded 93% of programme through domestic fund while WHO and UNICEF funded 4% and 3% respectively.

The domestic funding of the programme reflects the strength and confidence of the government on self-reliance.

*Provide **Mandatory Attachment #7: Detailed two-year Procurement Plan-***

Both UNDP and UNICEF will be able to prepare the detailed procurement plan only after the final approval of the activities. Therefore, this will be submitted after formal approval of the proposal by Gavi. Further, the procurement plan is prepared annually, it will therefore not be possible to provide the procurement plan for two years.

PART F: TECHNICAL ASSISTANCE NEEDS

17. Prioritised areas for technical assistance

This section contains information typically documented in a joint appraisal form. It summarises the highest priority areas in need of technical assistance by the national immunisation programme in the coming year. This should take into considerations implementation of both new vaccines and HSS support, to improve coverage, equity and financial sustainability.

Area requiring technical assistance	Type of assistance needed

ANNEXURES

Annexure 1: Geo-scoping

Activity	Geographical scope		Criteria for selection
	No. of States	Names of States	
Objective 1: To strengthen and maintain robust data systems to improve evidence based decision making.			
Routine immunization monitoring	20 states	Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand & West Bengal	Routine immunization monitoring being undertaken in these states by WHO NPSP
VPD surveillance	15 states	Karnataka, Delhi, Tamil Nadu Chandigarh, Assam, Rajasthan, Himachal Pradesh, West Bengal, Gujarat, Maharashtra, Andhra Pradesh, Tripura, Telangana, Odisha, Chhattisgarh.	Based on VPD risk prioritization & availability of lab support
ANMOL	Selected states (to be determined)	Rajasthan, MP, Chhattisgarh, Jharkhand	It is based on State readiness, program priority and will be decided in consultation with Ministry of Health
Objective 2: To improve capacity of human resources for service delivery and program management for equitable and efficient immunization services.			
Urban RI	10 cities (to be determined)	10 cities of Uttar Pradesh and Odisha	Based on low immunization coverage in urban pockets
Tribal strategy	3-4 states with tribal population	Maharashtra, Gujarat, Jharkhand	Based on the overall tribal population in the states, districts with large tribal population, immunization coverages, geographical feasibility etc.

WHO TOTs — immunization handbook, health worker module and microplanning	12 states	Bihar, Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh & West Bengal + 2 select NE states+ 2 low performing states	In continuation with Gavi-HSS1 states, select NE states and low RI performing states.
RISE	5 states	Himachal Pradesh, Kerala UP Maharashtra Odisha	One state each from north, east, west, central and south zones; including one high priority state; and ensuring a mix of good, medium and poor performing states

Objective 3: To strengthen vaccine logistics and cold chain management through improved data systems, infrastructure strengthening and human resource capacity.

eVIN	Remaining 24 states/UTs	Remaining 24 states/UTs	
TOTs for CCH and training of CCTs	All states	All states	To ensure that all cold chain handlers are well equipped with updated information and guidelines to ensure vaccine safety and management. Additionally all Cold chain technicians are provided hands-on training on all types of equipment available under immunization programme (new and old technology).
EVM	16 large states	16 states (UP, MP, Bihar, Rajasthan, Odisha, Jharkhand, Chhattisgarh, Gujarat, WB, AP, Telangana, Karnataka, Maharashtra, TN, Kerala, Assam)	Majority of vaccines are stored in these large states as they are catering to the biggest share of target population.

Objective 4: To strengthen vaccine logistics and cold chain management through improved data systems, infrastructure strengthening and human resource capacity.

SMNet	2	UP and Bihar	Over 6500 mobilizers in the renowned Social Mobilization Network (SMNet) support GOI in the two traditional polio reservoir states of Uttar Pradesh and Bihar with robust evidence-based communication strategies for Polio and Routine Immunization in
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			underserved and high risk communities.
Communication plans and linkages to micro-plans through SBCC cells	16 states	16 states (UP, MP, Bihar, Rajasthan, Odisha, Jharkhand, Chhattisgarh, Gujarat, WB, AP, Telangana, Karnataka, Maharashtra, TN, Kerala, Assam)	Previous Gavi states and addition of four more states as Gavi states to enable interventions in specific geographical areas such as tribal, urban, hard to reach and remote characteristics.
CSO partnerships	6 states	UP, Bihar, Odisha, Jharkhand, MP, Rajasthan	UP, Bihar, Odisha, Jharkhand, MP, Rajasthan. Since these states have lowest immunization rates in the country and also strong presence of CSOs.
TOT for SBCC and IEC	All states except (Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu, Pondicherry and West Bengal)	All states except (Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu, Pondicherry and West Bengal)	Training Plan has been developed as a comprehensive plan to cover high priority districts. The southern states have been excluded due to good immunization coverage.
Media Advocacy	9 states	Bihar, Rajasthan, UP, MP, Assam, Chhattisgarh, Jharkhand, Gujarat, Assam	After extensive mapping, UNICEF has chosen 9 priority states – Bihar, Rajasthan, UP, MP, Assam, Chhattisgarh, Jharkhand, and Gujarat - which have the lowest rates of RI in the country. This indicates a pressing need for sustained interventions and addressing the challenges faced in ensuring universal coverage of immunization which is of paramount importance. These 9 high priority states have also been selected bearing in mind the tribal districts in the area which need to be targeted for concentrated awareness created. Additionally, Assam has been selected particularly

			with a focus on targeting the north east states for immunization communication.
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Annexure 2: Chart for Partner linkages

Objective	Activity No.	Activity	Lead Agency	Interlinkage with other activities and partners	Gavi's Support in the activity	Activities of Government	Sustainability
Objective 1: To strengthen and maintain robust data systems to improve evidence based decision making	1.1	Sustaining RI monitoring to improve the quality of immunization services	WHO	All immunization strategic partners in India. Feedback mechanism established at all levels	FTE of SMO salary and hiring of monitors in select state.	Deployment of Immunization field volunteers (IFV) with NHM support, Supervision support at state and district level through NHM.	Sustain ongoing IFV mechanism and further more expansion of IFV monitoring in other states by NHM. Support NPSP monitoring through state PIP. Monitoring by government supervisors medical officers.
	1.2	Capacity building at national, state and district levels for expansion of VPD surveillance	WHO	Involve partners in capacity building efforts. Partnership with CSO (IAP and IMA) and state. VPD surveillance bulletin shared periodically. Data from VPD surveillance utilized to improve coverage with support of all partners	State ToTs	District ToT and subdistrict workshop. Cost for case investigation, sample collection, shipment and lab support cost	PIPs to bear the cost of state ToTs and reviews. Capacity of government MO and IDSP built to sustain VPD surveillance.
	1.3	Introduction of ANM Online (ANMOL) as way to improve data collection and management to improve service delivery	UNICEF	1. ANMOL will support name based tracking system for mother and child. The due list generated from ANMOL will be used for micro-planning, vaccine supply and tracking left-out and drop-out. 2. ANMOL data will be available to all partners for planning, review and data triangulation, thus supporting their planned interventions like capacity building on micro-planning, due-list preparation etc. 3. Android platform can be used to incorporate capacity building and demand generation 4. Partners will support in implementation monitoring	1. Procurement of 15% of tablets, 2. Capacity building of master trainers of select states, 3. Support cell to manage data for 3 years 4. HR support at centre for 3 years	1. All trainings at state/district/block level using the master trainers will be conducted using Govt. funds in all states, 2. Procurement of all tablets beyond the Gavi support 3. Capacity building of master trainers in remaining states 4. Monitoring of ANMOL implementation	ANMOL is in line with the government's 'Digital India' initiative, and therefore has strong political and administrative commitment. MoHFW has already initiated the project in two more states (Madhya Pradesh & Telangana) with domestic funds. There is a strong component of programmatic and financial commitment from the government and thus addressing the sustainability issues
	1.4	Monitoring and Evaluation are planned to provide data for improved decision making	UNICEF	Coverage data will be shared with all partners for better planning and monitoring	Part funding by Gavi	GoI to provide oversight and coordinate activities including sampling, survey methodology, questionnaires, quality guidance, tabulation plan, data analysis and final tabulation data presentation	

	1.5	Research interventions are planned to provide data for improved decision making	UNDP	Research data will be shared with MoHFW and partners			
	1.6	Gavi Secretariat	UNDP	1. Sharing of Minutes of Meeting 2. Organizing partner coordination meetings			
	1.7	HR support at National Level	WHO	National level staff actively engaging with partners on immunization	FTE (25% salary)	Not supported as of now	Government to support this as a part of NPSP transition plan.
Objective 2: To improve service delivery through improved capacity of human resources	2.1	Capacity building of master trainers for microplanning and RI strengthening	WHO	All partners engaged as trainers, facilitators, development of training material	State ToTs	District and subdistrict workshop, Conducting field survey and development of microplan through PIP.	Besides support provided for microplanning activities, PIP to include state ToT cost. Institutionalize these through NIHFW/ SIHFW using standardized norms.
	2.2	Rapid Immunization Skill Enhancement (RISE) – a continuous knowledge building system strengthening approach in India	JSI	All training packages developed by partners to be incorporated into RISE package and RISE will be incorporated in all training programs	Development of RISE and its pilot in five districts	Government conducts training for various cadres of health workers on immunization at regular intervals following a cascade model	The infrastructure (server etc.) required for e-package and m-package under RISE will be stationed at NIHFW the apex training institute of the country. The content of the packages will also be developed in consultation with NIHFW and relevant trainers will be trained to implement the RISE package.
	2.3	Development of a tribal strategy for Immunization program	UNICEF	1. Development of tribal strategy will provide an effective tool in addressing the issue of left out/drop-out among marginalized population. 2. This strategy will compliment Govt. and partner's supported initiatives like Mission Indradhanush to reach unreached children, thus bridging the equity gap. 3. All partners including local partners, CSOs, CBOs, representative from allied ministries to be involved in development of tribal strategies	1. Need assessment and piloting of select strategies in select geographies	1. Implementation of developed strategy in tribal areas	In India, National Ministry of Tribal Affairs aims to provide more focused approach on the integrated socio-economic development of the Scheduled Tribes (STs), in a coordinated and planned manner. Hence funds for implementation of any strategy related to tribal population are available with both the National Ministry of Health & Family Welfare and National Ministry of Tribal Affairs.
	2.4	Enhancing routine immunization quality and coverage, and addressing inequities in urban areas	WHO	All partners including local partners, urban bodies, CSOs, CBOs, representative from allied ministries to be involved in development of urban strategies. Joint orientation and review of the strategy to be supported.	Catalytic support in 10 identified cities.	NHM (urban health) Identified 1057 cities. Working closely with immunization division and partners.	Workable models demonstrated in 10 cities to be expanded with need based supported through PIPs (including 10 cities).

Objective 3: To strengthen cold chain and Vaccine logistics systems	3.1	Capacity development of cold chain and vaccine handlers, technicians and vaccine logistics managers (all states)	UNICEF	<p>1. Capacity building of staff managing cold chain & vaccine will directly complement efforts done by other partners like MO training by WHO, eVIN training by UNDP, communication training by UNICEF.</p> <p>2. The complementary of the various trainings of different cadres of health workforce will strengthen the immunization program.</p> <p>3. All partners are involved in development of training package and act as trainers at various levels of training. Members of partner organization are trained on these packages to support the state government. Partners are also involved in monitoring.</p>	<p>1. Training of CCT (1 per district)- Gavi funds will be used to partially cover the training cost will the rest will be borne by Govt.</p> <p>2. Master Trainer for training of CCH (200: state & regional).</p> <p>3. Vaccine and cold chain management training (For national, state & district level program Managers) - Gavi funds will be used to partially cover the training cost will the rest will be borne by Govt.</p> <p>4. Development of multimedia training material (Animated videos & job aids) for CCT and CCH</p>	<p>1. CCT Training: Part of the training cost including the travel cost, training venue, facilitators etc. are covered by Gol</p> <p>2. Training of all CCH (60,000) at district and block level will be covered by Gol</p> <p>3. Vaccine & cold chain management training: Part of the training cost including the travel cost, training venue, facilitators etc. are covered by Gol</p>	The majority of activities related to this intervention are funded and managed by Govt. of India including capacity building at State and district level. Govt. of India has already taken up most of these activities, sustaining the remainder activities will not be a challenge. HSS 2 funds are mainly to support the ToTs and for scale up of the VMC.
	3.2	NCCMIS augmentation and Immunization Supply Chain-Cold Chain data harmonization	UNICEF	<p>1. NCCMIS acts as a backbone to inform and manage cold chain MIS in entire country and provide information about latest developments and guidelines in this domain.</p> <p>2. NCCMIS and eVIN system complement each other by providing information about cold chain inventory, sickness rate, spare parts etc. 3. A common dashboard with data from NCCMIS and eVIN will support the program managers at national, state and district level in effectively managing immunization supply chain.</p> <p>4. NCCMIS also complements new vaccine introduction by forecasting of the available and required cold chain space at different levels.</p>	<p>1. National and State level training (travel cost to be borne by Gol) on NCCMIS</p> <p>2. National review meetings for cold chain management including NCCMIS review</p> <p>3. Dashboard development</p>	<p>1. District level Training on NCCMIS augmentation</p> <p>2. Block level training on NCCMIS augmentation</p> <p>3. Hosting of NCCMIS, technical support to states, hosting of helpdesk and data review system</p> <p>4. Computers, internet and all associated cost for reporting of data from state and district level</p> <p>5. State and district level review meetings for NCCMIS implementation</p>	NCCMIS is fully functional in all 36 states and UTs with the system hosted on Govt. server and fully owned by Gol. The updations and modifications are also conducted by NICSI, under ministry of IT. The data reporting, monitoring and review is fully owned and conducted by respective State Govts. A immunization supply chain harmonization process is being initiated to provide a holistic picture to managers and decision makers for effective supply chain-cold chain management.

	3.3	Support Govt. in review and implementation of EVM Improvement Plans (16 large states)	UNICEF	<ol style="list-style-type: none"> 1. EVM is a measure of the quality of immunization supply chain at various levels and builds the local capacity in managing cold chain-supply chain. 2. EVM also helps in measuring the outputs of various interventions like capacity building, MIS (eVIN & NCCMIS), supportive supervision by Govt. & various partners. 3. All partners at national and state level participate in EVM review and development of improvement plan (IP). 4. IP reviews are jointly organized and reviewed by Govt. and partners. 	<ol style="list-style-type: none"> 1. Supporting states in undertaking Effective Vaccine Management (EVM) assessment and development of Improvement Plan 2. Support states/nation in implementation of improvement plan 3. National review meetings to follow up on progress/ CCL improvements 	<ol style="list-style-type: none"> 1. Government officials are primarily deployed to conduct the EVM assessment 2. Nearly all activities envisaged under Improvement Plan are implemented using Government budget. 3. A pool of EVM experts from various state Governments will be created to support different states in planning and review of their immunization supply chain status to make it self-reliant. 4. GoI supports approx. 85 percent of cost of EVM assessment and implementation. 	EVM is a global tools and used as a benchmark for assessment of vaccine logistics and cold chain management under the immunization programme. During the HSS1 and upcoming HSS-2, capacity is being built within the state to conduct self-appraisal using the global tool. With the availability of free EVM-2 mobile application, states will be able to collect their data freely which will be stored at NCCMIS server on Govt. system with no additional cost. Moreover, capacity of NCCVMRC (a Govt. owned National apex centre for Immunization supply chain) has been strengthened to provide requisite support to state govt. in conducting EVM, analysing data, development of Improvement plan and track progress thus instutionalizing the entire process of EVM.
	3.4	Strengthening of Institutions, cold chain infrastructure and equipment	UNICEF	<ol style="list-style-type: none"> 1. The two apex centres supported through this project acts as a national resource centre for interventions related to immunization supply chain provided by Govt. & different partners. 2. NCCVMRC also supports in national level trainings on immunization conducted by Govt. & partners. 3. NCCVMRC is also the secretariat for immunization supply chain and supports various initiatives like EVM, common dashboard, various assessments including post training assessments of MO & cold chain handlers, etc. 	<ol style="list-style-type: none"> 1. Workshop for capacity building of Indian Manufacturers for WHO-PQS compliant CCE 2. Limited Technical HR support for the two apex institutions, NCCVMRC & NCCRC, created under Government 3. Limited technical support to NCCRC in establishment of CCE testing Lab 4. Need based emergency procurement to bridge acute cold chain gap 	<ol style="list-style-type: none"> 1. Both these centres are under Govt. and majority of funding for establishment and maintenance of both these centre are from Govt. of India. This includes building and hostels, management bodies and HR (>50% post are from the Govt.). 2. The cost of establishing the CCE testing lab is through GoI 3. Nearly all cold chain equipment are procured by Govt. of India including the recent procurement of more than 20,000 ILR-DF. 	Both the apex centres, NCCVMRC and NCCRC, are fully owned by Govt. and more and more staff are now being hired by Govt. The recurrent and maintenance cost of these centres are built in the Govt. budget plans and have a clear sustainably pathway. Govt. also plans to use the CCE testing facility to bridge the gap of Indian manufactures supplying cold chain equipment to immunization programme by testing and certification process.

	3.5	To strengthen vaccine logistics management through eVIN	UNDP	Partners involved in state level training. UNICEF, UNDP and NCCVMRC collaborate to generate and share dashboards for immunization supply chain with all partners. HR involved in eVIN implementation support new vaccine introduction and other activities planned by partners at state level.	Funding support for 24 states/UT for the HSS-2 timeframe		Gol will fund and implement eVIN in all states from 2021 onwards
Objective 4: To improve demand generation for immunization services to improve coverage and address inequities	4.1	Capacity development of FLWs /providers on SBCC and IPC through training of master trainers	UNICEF	1. The IPC training for FLWs will complement technical training for ANMs conducted by WHO. 2. This training will address the most common reason for low immunization coverage i.e. lack of awareness and fear of side-effects of vaccination.	1. Development and distribution of training tools, including Facilitator Guide, Training aides 2. Development and distribution of Job aides, IPC tools for all FLWs (ANM+ASHA+AWW+other associated health workers) 3. Conducting trainings of trainers 4. National lesson sharing workshop 5. State progress review workshop	1. Training of FLWs (more than 475,000 ASHAs and ANMs) 2. TA/DA to the participants for all trainings will be provided by Govt.	1. FLW trainings will be budgeted and reported in the training plans of MOHFW; and led by the state Health Department 2. TOTs will be for trainers from within the Health System, which promotes accountability. 3. Supportive supervision to be provided to FLWs will be from the training staff
	4.2	Communication planning linked with micro planning to reach high-risk/underserved through SBCC cells	UNICEF	1. During the program microplanning exercise carried out by WHO and partners, communication microplanning will also be integrated through specialized communication planning tools in close collaboration with program managers at different levels	1. Consultants for SBCC Cell at state IEC Bureau/SIHFV for strengthening IEC bureau/SBCC cells 2. District action plan development is held every year	1. Budget for communication plan will be provide by Gol	Communication planning and microplans are an integral part of the annual development of PIPs at the state level; district plans are considered as part of the plan
	4.3	Strengthening community based/ CSOs multi-stakeholder partnerships	UNICEF	1. Following key lessons from previous partnership initiatives in RI using faith based organizations, Community based institutions, a more collaborative institutional partnership with CSO and community level institutional structures will be strengthened	1. Partnership consultations, bi-annual review meetings 2. Partner capacity building 3. HR to manage partnership coordination 4. Partners field review missions	1. Gol to endorse proposed CSO partners 2. Gol to chair CSO partners meets 3. CSO partners invited to participate in state and district task-force meetings	1. CSO partnership framework will be developed and advocated for endorsement; 2. Leading CSO partners such as IAP/IMA, Rotary, Save the Children, Mamta, PSI, already key partners in government programs 3. Many CSOs at state level receive regular funding from government

	4.4	Effective use of Polio Network (SMNet) for routine immunization health systems strengthening	UNICEF	<ol style="list-style-type: none"> 1. SMNet supports State Governments and works closely with WHO-NPSP in high risk areas to address the challenges associated with RI and various campaigns. 2. SMNet works closely with influencers, religious leaders and institutions to increase confidence in the immunization program. 3. SMNet, in collaboration with other partners, also provides various data sources to help program managers in decision making related to communication and demand generation. 	<ol style="list-style-type: none"> 1. Strengthen systems for effective inter personal communication and social mobilization using Polio social mobilization network 2. Refreshers Trainings for SMNet 	<ol style="list-style-type: none"> 1. The UP government cover approximately 18% of SMNet costs for 2015-2016, and 42% 2016-2017 and Bihar government will cover 49% of SMNet cost for 2016-2017 and 63% for 2017-2018. Gavi contribution in HSS1 was \$ 2 million per year (21.7%) and remaining contribution was from UNICEF, GPEI partners and Gol. 	<ol style="list-style-type: none"> 1. Gol and UNICEF reached a historic agreement on the transition of the Social Mobilization Network (SMNet) in November 2015. The Ministry of Health and Family Welfare, agreed to fund the states of UP and Bihar for the SMNet progressively leading up to March 2018, thereafter the states will have to determine the funding and future of SMNet.
	4.5	Communication monitoring and supportive supervision through use of standardized formats, dashboard analysis	UNICEF	<ol style="list-style-type: none"> 1. Standardized communication monitoring are used by partners to collect data and data findings are used by state government and partners 	<ol style="list-style-type: none"> 1. Deployment of monitors to high priority states for monitoring of RI and campaigns 2. Adaption of the M&E tool and development and printing of communication Dashboard 	<ol style="list-style-type: none"> 1. Government provides monitoring leadership at various levels and also provides monitors 2. Government endorses monitoring tools, indicators and plans 	<ol style="list-style-type: none"> 1. All monitoring web based tools will be developed in NCCMIS server, which is Government of India MIS system. In first year Gavi HSS2 funds will be used to develop web based tools, using SMNet manpower. Later, UNICEF and Gol will focus on increasing participation of state government officials and health supervisors and Gavi funds will only contribute in generating dashboards at National and State level. System will continue beyond Gavi support through regular monitoring of communication activities by health manpower and using Gol web based tools.

	4.6	Communication/mass media campaign development/support for common messaging at all levels	UNICEF	<p>1. As part of the strategic media engagement ITSU has been UNICEF's partner for training of spokespersons on AEFI.</p> <p>2. Additionally, WHO representatives will be senior spokespersons in many of the capacity building interventions with media.</p> <p>3. GHS and JSI have collaborated with UNICEF to write editorials on the critical issue of Routine Immunization and Rotavirus through Celebrity Ambassadors and Celebrity Advocates.</p> <p>4. Media monitoring has been shared with all partners for their use and course correction including the Government of India. UNICEF shared social media updates with all partners for the Media Rubella vaccination.</p>	<p>1. Strategic media engagement</p> <p>2. Capacity Building of media and spokesperson</p> <p>3. Engaging Celebrities</p> <p>4. UNICEF led media monitoring and analysis</p> <p>5. Strategic media planning and buying</p>	<p>GOI has previously supported dissemination of celebrity PSAs for Routine Immunization and will continue to support in utilizing government channels for the same. In terms of strategic media engagements, 20% of the total cost for state/district level mobilization of SMOs, SIOs and DIOs for media field visits and engagement will be done through government funding. 100% of the low cost buying and placement of products on RI will be done by DAVP.</p>	<p>1. A network will be created between media and the Govt. spokespersons and information officers which will continue beyond Gavi HSS-2 funds. The end result should be that the radio and Urdu media consider the government information officers their key focal contacts for any information / stories on immunization. A manual will also be created for training of the Spokesperson which may be used by the GOI for further engagements.</p> <p>2. The "critical appraisal skills program" will be implemented and key journalists and media students will be trained on this, enhancing their capacities to report constructively on immunization. Partner organizations in academic institutions (Indian institute of mass communication) will continue the course as a regular degree programme even after the seed funding. Additionally, the course may be adopted for officials of the Ministry of Information and Broadcast through partner agencies.</p> <p>3. Even after the HSS 2 funds, the celebrities will give their time free of cost to the immunization programs of the government of India.</p> <p>4. Development of a qualitative media analysis tool through which we will understand the voices of diverse influencers and how they support the value of vaccines. In addition, the information officers will be sensitized on the media monitoring tools and analysis so they can even monitor outputs on their own work.</p>
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Annexure 3: National Health Mission

In April 2005, Ministry of Health and Family Welfare launched National Rural Health Mission (NRHM), with the aim 'to provide accessible, affordable and quality health care to the rural population, especially the vulnerable groups'. NRHM was mandated to bring about an "architectural correction" of the public health system so as to make it "equitable, affordable and effective", with an enhanced capacity to absorb the increasing outlay on health.

In order to effectively address the health concerns of the urban poor population, in June 2013, National Urban Health Mission (NUHM) was launched; NRHM and NUHM combined to form National Health Mission (NHM). The aim of NHM is – 'Attainment of universal access to equitable, affordable and quality health care services, accountable and responsive to people's needs, with effective inter-sectoral convergent action to address the wider social determinants of health'.

The NHM requires states to submit sector wide well integrated state plans which it then jointly with the states, appraises for consistency with the NHM framework for implementation. Based on this appraisal the state plans are approved and the NHM then provides the financial resources and technical support needed to implement these plans.

NHM has led to increase in public expenditure on health care from the centre. The corollaries of such a policy directive are not only an increased central government budgetary outlay for health, but that the states also make a matching increase.

All existing vertical programmes under NRHM, are horizontally integrated at state, district and block levels providing an integrated state, district/city programme implementation plan, sharing data and information across these structures. Thus, there is rationalization of use of infrastructure and human resources across these vertical programmes.

NHM functions on the following core values:

- Safeguard the health of the poor, vulnerable and disadvantaged, and move towards a right based approach to health through entitlements and service guarantees
- Strengthen public health systems as a basis for universal access and social protection against the rising costs of health care.
- Build environment of trust between people and providers of health services.
- Empower community to become active participants in the process of attainment of highest possible levels of health.
- Institutionalize transparency and accountability in all processes and mechanisms.
- Improve efficiency to optimize use of available resources

The NHM is a major instrument of financing and support to the states to strengthen public health systems and health care delivery. The financing to the state is based on the state's Programme Implementation Plan (PIP). The PIP has following parts:

Part I: NRHM RCH Flexi pool

Part II: NUHM Flexi pool

Part III: Flexible Pool for Communicable Diseases

Part IV: Flexible Pool for Non Communicable Diseases, Injury and Trauma

Part V: Infrastructure Maintenance

Within the broad national parameters and priorities, states have the flexibility to plan and implement state specific action plans. The state PIP reflects the key strategies, activities undertaken, budgetary requirements and key health outputs and outcomes.

National health mission focuses upon three service delivery strategies:

1. Reproductive, Maternal, Newborn, Child health and Adolescent (RMNCH+A) services
2. Control of communicable diseases
3. Non communicable diseases

All schemes and programmes that constituted RCH-II are absorbed into the NHM. The linkages between adolescent health, family planning, maternal health and child survival have been recognized and continuum of care has been emphasized. The main strategies for RMNCH+A include services for mothers, newborns, children, adolescents and women and men in the reproductive age group.

RMNCH+A services include:-

1. Maternal health:

Key strategies for maternal health include improved access to skilled obstetric care through facility development, increased coverage and quality of ante-natal and post-natal care, increased access to skilled birth attendance, institutional delivery; basic and comprehensive emergency obstetric care through strengthening of carefully prioritized health care facilities. Janani Suraksha Yojana (JSY) has enabled and continued to strengthen institutional delivery. A comprehensive package of free and cashless services currently covering all pregnant women, and sick infants up to the age of one year, in government health institutions through Janani Shishu Suraksha Karyakram (JSSK), thereby reduce financial barriers to care and improve access to health services by eliminating OOP expenditure in all government facilities.

2. Access to safe abortion services
3. Prevention and management of RTI and STI
4. Gender based violence (GBV): sensitize and train frontline workers and clinical service providers to identify and manage GBV, train ASHAs to identify and refer/counsel cases of GBV in the community, develop effective referral mechanisms from primary care to secondary and tertiary centres, with assured services, build functional referral linkages and create follow up mechanisms with government departments and NGOs providing legal and social welfare services and women's support groups in the district.
5. Newborn and child health: provision of home based newborn and child care including establishment of facility based care for the newborn.
6. Universal immunization Programme
7. Child Health Screening and Early Intervention Services
8. Adolescent health
9. Family planning
10. Addressing decline in sex ratio
11. Cross cutting areas like BCC and addressing social determinants

Control of communicable diseases

Flexi pool for Communicable Diseases facilitate the states in preparing state, district and city specific PIPs

1. The National Vector Borne Diseases Control Programme (NVBDCP)
2. Revised National Tuberculosis Control Programme (RNTCP)
3. National Leprosy Control Programme (NLEP)
4. Integrated Disease Surveillance Programme (IDSP)

Non communicable diseases

The schemes and interventions under the non-communicable diseases that are implemented upto the district hospital are financed through a Flexible Pool for non-communicable diseases under NHM.

1. National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)
2. National Programme for the Control of Blindness (NPCB)
3. National Mental Health Programme (NMHP)
4. National Programme for the Healthcare of the Elderly (NPHCE)
5. National Programme for the Prevention and Control of Deafness (NPPCD)
6. National Tobacco Control Programme (NTCP)
7. National Oral Health Programme (NOHP)
8. National Programme for Palliative Care (NPPC)
9. National Programme for the Prevention and Management of Burn Injuries (NPPMB)
10. National Programme for Prevention and Control of Fluorosis (NPPCF)

NHM infrastructure and Human resource

Under NHM, financial support is provided to states to strengthen the public health system including upgradation of existing or construction of new infrastructure. The high focus states can spend up to 33% and other states up to 25% of their NHM funds on infrastructure. The population Norms for setting up of public health facilities is as under:

- Sub Centre: 1 per 5,000 population in general areas and 1 per 3,000 population in difficult/tribal and hilly areas
- Primary Health Centre: 1 per 30,000 population in general areas and 1 per 20,000 population in difficult/tribal and hilly areas
- Community Health Centre: 1 per 120,000 populations in general areas and 1 per 80,000 populations in difficult/tribal and hilly areas.
- Sub-health centres: A new norm has also been adopted for setting up a SHC based on 'time to care' within 30 minutes by walk from a habitation has been adopted for selected district of hilly and Desert areas.

The district acts as a link between the state structures and the peripheral level structures such as Community Health Centres (CHCs), Primary Health Centres (PHCs) and Sub-Centres. The district officer with overall control of all the health programs within a district is designated as the Chief (or District) Medical and Health Officer. In addition, every district has a District Health Society, which is responsible for planning and managing all health and family welfare programmes in the district. The districts are responsible for working and coordinating with their states for implementation and supervision of various programmes, including immunization. State and district Task Forces are responsible for monitoring the immunization programme Under the NHM, over 1,72,876 health human resources have been added to the health system across the country (up to June 2015) which include 10,618 allopathic doctors/specialists, 24,890 AYUSH doctors, 73,154 Auxiliary Nurse Midwives (ANMs), 40,847 staff nurses, and 23,367 paramedics including AYUSH paramedics. The Accredited Social Health Activist (ASHA) has been active in all states as an essential link between the community and the public health system. ASHAs (9.15 lakhs as on 30th June 2015) are engaged and trained in each village / large habitation in the ratio of one per 1000 population.

National Urban Health Mission

The National Urban Health Mission (NUHM) as a sub-mission of National Health Mission (NHM) was approved by Gol on 1st May 2013.

NUHM envisages to meet health care needs of the urban population with the focus on urban poor, by making available to them essential primary health care services and reducing their out of pocket expenses for treatment. This is achieved by strengthening the existing health care service delivery system, targeting the people living in slums and converging with various schemes relating to determinants of health like drinking water, sanitation, school education, etc. implemented by the Ministries of Urban Development, Housing & Urban Poverty Alleviation, Human Resource Development and Women & Child Development.

NUHM would endeavour to achieve its goal through:-

- Need based city specific urban health care system to meet the diverse health care needs of the urban poor and other vulnerable sections.
- Institutional mechanism and management systems to meet the health-related challenges of a rapidly growing urban population.
- Partnership with community and local bodies for a more proactive involvement in planning, implementation, and monitoring of health activities.
- Availability of resources for providing essential primary health care to urban poor.
- Partnerships with NGOs, for profit and not for profit health service providers and other stakeholders.

NUHM aims to cover all State capitals, district headquarters and cities/towns with a population of more than 50,000. It primarily focus on slum dwellers and other marginalized groups like rickshaw pullers, street vendors, railway and bus station coolies, homeless people, street children, construction site workers.

The centre-state funding pattern is 75:25 for all the States except North-Eastern states including Sikkim and other special category states of Jammu & Kashmir, Himachal Pradesh and Uttarakhand, for whom the centre-state funding pattern is 90:10. The PIPs sent by the states are appraised and approved by the Ministry of Health & Family Welfare.

Annexure 4: Implementation of ANMOL in Andhra Pradesh: Experiences from field

The ANMOL tablets have made it easier for the ANMs to enter the data and keep track of the beneficiaries. All the ANMs have been provided with their own id and password and unlike before they can enter data offline also. In addition, the ANMOL tablet has the fields similar to the RCH registers, making it easy for ANMs to enter the data which can be concurrently entered with ease while delivering the services in the field. Since, Aadhar linkage (Unique govt. ID) is available; therefore the entry of basic data of the beneficiary is not required, hence saving the time of ANMs. Also, tablets give the facility of generation of reports on a click, thus saving the time which was earlier spent on making of reports. About 65.5 hours are saved per month per ANM by using ANMOL tablet for data entry. A brief summary of time saved is given below:-

Time taken for area of work	Before	After
Data entry at PHC including travel period (twice a week)	40 hrs	4 hrs
Preparation of reports for monthly sector meeting once a month	8 hrs	One click
Preparation of beneficiary enumeration list and logistic requirements list for VHNDs	20 hrs	One click
Time taken for preparing the details on all major indicators for Gramasabha	2 hrs.	0.5 hrs.
Entry of field services in to RCH register	More (From diary)	Less (from TAB)

Annexure 5: Brief on National Cold Chain & Vaccine Logistics Action Plan (NCCVLAP) and linkages with Gavi HSS 2 activities

The National Cold Chain & Vaccine Logistics Action Plan (NCCVLAP) is the culmination of a comprehensive process of multi stakeholder engagement over a series of discussions regarding India's future steps in the direction of developing an effective and efficient immunization supply chain system. The NCCVLAP reflects the commitment of Government of India towards the comprehensive Multi Year Plan 2013-2017, and is underpinned by the WHO Global Vaccine Action Plan. The NCCVLAP clearly enunciates the road map that the country needs to traverse in order to deliver on high quality immunization services. The document provides a vision and path for policy-makers and planners to design, implement and monitor their immunization supply chain initiatives at the national, state and district levels. This includes a mix of public health programming and management components to be addressed in achieving the national goals.

The NCCVLAP document is fully endorsed by Government of India and while making Gavi HSS-2 proposal, the cMYP and NCCVLAP documents have been referred so that the vision which the Government of India has for a successful immunization programme can be achieved. Most of the activities which are proposed in Gavi HSS-2 proposal are designed around the NCCVLAP goal of reaching every child with safe and potent vaccine.

The overall broad strategic objectives of the NCCVLAP are:

- All beneficiaries under the UIP should receive safe and potent vaccines which have been stored at recommended temperature range at all ISC levels.
- There should be no stock outs of any antigens at any supply chain level.
- The cold chain sickness rate should be less than 2% at all levels.
- There should be minimum global immunization supply chain standards at all levels. (EVM criteria and categories)
- Promoting institutional capacity and networks to supplement the ISC activities of the MoHFW.
- Optimization and self-sufficiency in cold chain equipment, technology, processes and funding.

The delivery of the above strategic objectives will be met through the provision of quality standards, resources, protocols, procedures and systems.

Six strategic interventions have been proposed under NCCVLAP document which will help in achieving the above stated objectives and will finally lead to a strengthened cold chain system and improved immunization programme. These interventions are:

- Buildings for Vaccines Stores, CCE and Transport
- CCE, spare parts and new technology
- Quality Storage of Vaccines
- Human resources
- Supportive supervision and assessments
- MIS

These six strategic interventions are already being implemented by the Government of India through various programs and policies and will also be implemented under the planned

activities of Gavi HSS-2 proposal, mainly through objective 3 i.e. “To strengthen vaccine logistics and cold chain management”.

India is one of the largest vaccine manufacturers and exporter in the world but the presence of vast Indian refrigeration industry in immunization program is totally missing. The entire national immunization program is dependent on imported devices leading to issues of repair, maintenance and spare parts. UNICEF, under the Gavi HSS grant, took the first step to sensitize Indian manufacturers on the vast immunization program, the need of cold chain equipment and to support them in addressing challenges to become part of immunization program. The key reasons for non-participation of Indian manufactures included unawareness about the market, no or limited knowledge of WHO PQS procedure and standards, non-availability of PQS lab in India and high cost associated with testing the equipment offshore leading to non-participation. UNICEF continues to peruse this strategic area in development of a WHO-PQS lab under the Gavi-HSS 2 and support not only India’s immunization program but also contribute to the global public health program and also be part of Govt. of India ‘Make in India’ mission.

Using Gavi HSS-2 funds, NCCRC and NCCVMRC will be strengthened so that all the cold chain points of the country can be supported by a central system. In addition, indigenous solution will be developed and new innovations on cold chain technology will be developed so that the country can become self-reliable and is not dependent on the imported cold chain equipment and spare parts.

The Government is tendering for new cold chain equipment so that there is no shortage of cold chain space with introduction of new vaccines in the country. In addition to the domestic funds of Gol, Gavi HSS-2 funds will be used to procure need based cold chain equipment on emergency basis to fill in the gap if any in the cold chain system. This will help in supporting the Gol at the time of any shortage of CCE. The NCCMIS and eVIN together has helped in better management of cold chain and vaccine. These two application have helped in reducing the vaccine wastage, anticipation of stock outs in advance, maintenance of cold chain equipment and repair of CCE on time, thus, saving the Government both time and money. The data received from NCCMIS and eVIN has played a major factor in quality storage of vaccines thus helping in delivery of safe and potent vaccines to the children. Now, it is being proposed that data from various sources like NCCMIS, eVIN, supportive supervision of cold chain will be aggregated and harmonized to provide a better understanding, correlation and usage of data for program purpose. This new augmented version of NCCMIS would be a handy tool for the program managers at all levels. The new version would also generate a dashboard and make the data sharable with various stakeholders. This would also be having flexibility of accessing through newer technologies (android / windows / i-phone). Once the augmented version is made available, its sustainability would be taken care by MoHFW through the already established government funding mechanism to NCCVMRC. Support through HSS-2 would help harmonize information across various sources, and provide a holistic view of the program performance and help identify and understand the gaps or duplication of data that may result from triangulation.

A central resource centre has already been developed at NCCVMRC and training centre has also been established at NCCRC, Pune. These two central institutes play a major role in strengthening the human resource involved in cold chain maintenance across the country. In HSS 2, capacity building activities will be implemented to cover over all 27,000 cold chain

points in country, nearly 500 cold chain technicians, and 900 program managers at state and district level to support current EPI and newer vaccine introduction through state and regional ToTs. It is anticipated that the modules for all ToTs will be revised / updated at a gap of 3-4 years considering the introduction of newer vaccines, newer cold chain technology and guidelines etc. Rigorous pre-post assessment would be conducted to assess knowledge and skill retention. These

As per the guidelines EVM assessments are planned at least once in 3 years. Under Gavi HSS-2 EVM assessments are planned in 16 states. Based on the findings, improvement plans will be prepared and implemented in the states. This would help in strengthening of cold chain system and in achieving the cold chain sickness arte of <2%. The supportive supervision of the cold chain system would be continued and NCCMIS and eVIN data will be regularly used to monitor the vaccines and cold chain system of the country.

There has always been coordination among various partners and the data is shared during the regular review meeting held under chairmanship of Deputy Commissioners. The cold chain data and the immunization coverage data along with any programmatic issues in field are shared during the meetings and the partners work together to improve the immunization coverage in the country.

A brief summary of how the interventions proposed under NCCVLAP document have been proposed in Gavi HSS-2 is given below:

S.No	Intervention proposed under NCCVLAP	Activities proposed under Gavi HSS-2	
1.	Buildings for Vaccines Stores, CCE and Transport	Activity 3.4: Strengthening of Institutions, cold chain infrastructure and equipment	
2.	CCE, spare parts and new technology	Activity 3.4: Strengthening of Institutions, cold chain infrastructure and equipment	<ul style="list-style-type: none"> • Need based emergency procurement to bridge cold chain gap • Development of indigenous solution and innovation in cold chain technology • Strengthening of NCCRC with support in CCE testing Lab

3.	Quality Storage of Vaccines	Activity 3.5: To strengthen vaccine logistics management through electronic vaccine intelligence network (eVIN)	
4.	Human resources	Activity 3.1: Capacity development of cold chain and vaccine handlers, technicians and vaccine logistics managers	
5.	Supportive supervision and assessments	Activity 3.3: Support Govt. in review and implementation of EVM Improvement Plans	
6.	MIS	Activity 3.2: NCCMIS augmentation and Immunization Supply Chain-Cold Chain data harmonization	

Annexure 6: UNICEF initiative under HSS1 to achieve equity in RI in Jharkhand state

Jharkhand state (Reaching conflict regions with immunization services):

- 30% population of tribals lives in areas which are difficult to reach and access;
- Language is a major barrier as each tribal community speaks its own dialect;
- Naxalite affected (LWE) areas most difficult to reach by service providers.
- 300 of 750 villages are in 5 HPDs (Sahibganj, Pakur, West Singhbhum, Latehar, Palamau) and mapped as most deprived, disadvantaged, and marginalised groups.

After assessing the communication needs and operational challenges, UNICEF partnered with a local state-level NGO called Social Initiative for Growth and Networking (SIGN), with the following two objectives:

1. Empower community to oversee quality and appropriateness of child health services being delivered in the villages through community mobilisers and village volunteers.
2. Strengthen VHNDs (as VHNDs were important outreach sessions for immunization) through engagement of community in service delivery and support to service providers in addressing issues of access and language barriers.

For UNICEF, this meant using resources for:

1. Capacity development of partner (SIGN) on RI, participatory approaches, and IPC skills
2. Identification of village volunteers and mentoring through community mobilisers with supporting mobilization tools
3. Engagement with village heads and tribal leaders to garner support for working with tribal communities like *Ho*, *Birhor*, *Santhals* and *Paharia*.

Results:

1. 2,151 children from left out / dropped out pockets identified and linked with regular immunization services.
2. 722 village volunteers identified and their capacities built to support VHND
3. Services regularized at 300 VHND sites.
4. Strengthening opportunities for service providers in service delivery of RI in the selected areas.